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ABSTRACT

How farmers evaluate farm information sources, the views they hold of sources, and the relationship of views held to the use made of them were studied. The research was undertaken from two different vantage points: (1) determining how farmers view farm information sources, and (2) determining how views of farmers about sources are related to the variables considered in the study. The semantic differential was used to assess views in both phases. In Phase I, three steps were taken to secure a diversity of farmer opinion: (1) As many item scales were sought as would be reasonably expected to relate to views held about farm information sources; (2) A wide diversity of farmers was chosen to give their reactions to such sources in terms of the scales selected; and (3) The farmers were asked to express their views about a representative range of sources from which they ordinarily obtain farm information. In Phase II, the general procedure was to have samples of farmers rate five of the eight designated information sources in terms of the 14 selected item scales. Some general conclusions reached are: (1) Farmers have characteristic ways of viewing farm information sources; (2) Utility practicality, affectivity, and accessibility views can be distinguished; (3) The farmers studied differentiated between classes of sources in terms of these qualities. (CK)

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Views of Farm Information Sources Held by Farm Operators in two Missouri Farm Communities, Ozark and Prairie

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Views of Farm Information Sources Held By Missouri Farm Operators In Two Farm Communities, Ozark and Prairie

Herbert F. Lionberger and Joe D. Francis

INTRODUCTION

This study is concerned with how farmers evaluate farm information sources, the views they hold of sources, and the relationship of views held to the use made of them. The major reason for the study stems from a desire to investigate in some depth the fact that farmers view sources differently with the ultimate objective of determining how these views influence use and use preferences. Major emphasis here is on a careful documentation of what these evaluative views are and how they vary with sources and people.

More specifically, the study attempts:

(1) To empirically determine characteristics ways of viewing or evaluating farm information sources generally;
(2) To determine how views of such sources vary in the "minds" of farmers;
(3) To see whether these views vary with the vantage point of the information seeker, e.g., the old farmer versus the young, the progressive versus the traditional, those who serve as decision influences for others (legitimators' references) versus those who do not, those who have a reputation for innovativeness in farming versus those who do not, etc.;
(4) To determine whether views of certain classes of sources vary in a systematic order; and
(5) Finally, to see how views of those who used selected sources vary from views of those who do not use the source.

Finding answers to these questions involved two somewhat different research problems: (1) determining how farmers view farm information sources, and (2) determining how views of farmers about sources are related to the variables considered in the study. These two problems were handled separately in two different phases of the study.

A sample of 24 famers in and around Boone County, hand-picked to represent maximum diversity of views, provided the information needed to determine the diversity of views held of farm information sources. This is reported as Phase I of the study. Farmers living in two diverse Missouri farming communties, 228 in Ozark (south Missouri) and 175 in Prairie (northwest Missouri) provided the information needed for Phase II of the study.

Phase I
FINDING WAYS OF VIEWING FARM INFORMATION SOURCES

One way of assessing images held of farm information sources might be to ask farmers directly what their views or reactions are and note the way they habitually refer to various sources. In this manner, one might, for example, be able to detect that farmers have more confidence in written messages than in the spoken word, or that television is viewed mainly as a means of entertainment or recreation rather than as a potential source of scientific farm information, as seemed to be the case in the early days of television.

A more emipircal and exhaustive approach to the question of meaning might involve trying to find all of the possible ways that a farmer could look at farm information sources and then empirically determine how a sample of farmers with diverse views actually view them. An approximation to this procedure was the approach used in this study.

The *semantic differential* was chosen as the appropriate instrument for assessing and measuring views in both phases of the study.[1] This is a device which makes use of bi-polar adjective scales against which concepts (in this case farm information sources) can be viewed and rated. It is an instrument which has been tested for reliability and validity and has proved to be adequate for assessing dimensions of meaning or views held of a set of concepts, as well as assessing differences in meaning between them in a given population. For example, one might think of "other farmers" as a farm information source being somewhat between *good—bad,* or between being *up to date* or *out of date.* Any information source may be viewed and rated on the basis of many such scales.

The "first phase" problem was to define or determine the dimensions of ways of viewing information sources that farmers actually use. With the semantic differential chosen as the appropriate tool for measuring these views, the next requirement was to insure the appearance of a maximum diversity of specific views from which regularities or constellations of view could be abstracted. Thus, maximizing the diversity base was crucial.

Maximizing the Diversity Base

Feeling (1) that different kinds of farmers may be expected to have different views about different sources of farm information and (2) that any group of farmers would surely have different views about the same source, the conceptualization problem dictated that a near maximum diversity of views about a variety

[1]See p. 61 for footnotes.

of farm information sources be obtained. Three things were done to insure this diversity:

(1) As many item scales were sought as would be reasonably expected to relate to views held about farm information sources;

(2) A wide diversity of farmers was chosen to give their reactions to such sources in terms of the scales selected; and

(3) The farmers were asked to express their views about a representative range of sources from which they ordinarily obtain farm information.

1. *Selection of Adjective Pairs.* Having decided on an appropriate instrument (the semantic differential), the initial problem was to accumulate as many adjective pairs as possible that seemed relevant to viewing sources of farm information. A total of 43 relatively discrete paired items (actually 41 because of two dupicates) were obtained from (a) interviews with farmers, (b) studies conducted on the meaning of other concepts, and (c) paired adjectives lists prepared in the Department for other purposes. These 41 items were selected to represent the general range of cognitive, affective, and utilitarian ways of viewing farm information sources. (These are listed in Appendix A, Table I.)

2. *Selection of Respondents.* To obtain as much diversity of respondents as possible, practically speaking, 24 farmers in the mid-Missouri area were purposely selected. These farmers represented young, middle, and old ages; low, middle, and high incomes; and a diversity of farm enterprises; though most had a row crop operation of some kind. They were also of varying distances from urban centers. Some were located on major highways, others were not. These farmers were purposely selected, as the problem at this stage of the study was one of abstracting many different views, not generalizing to any universe of farmers.

3. *Selection of Concepts (sources).* With the idea of determining the general dimensions of meaning used in looking at a full range of information sources from which farmers ordinarilly obtained farm information, sources were divided into four types: mass media, business or commercial, governmental agencies, and local personal sources. Although the list was not exhaustive, it was felt that these categories constituted the major types of sources used by farmers.

Newspapers and radio were selected to represent the mass media; farm supply dealers, the business and commercial sources; and the county extension agent, the various governmental agencies. Though the latter may not be the most frequently used of the various governmental agencies, the theoretical importance of this agency to the dissemination of farm information dictated the choice. Lastly, "other farmers" were selected to represent the variety of personal sources—neighbors, wives, relatives, etc.

The Assessment Procedure

This procedure involved application of the 43 item-scales (actually 41 since there were two duplicates) to the 24 picked farmers. Each expressed his views

about five kinds of farm information sources (county agent's office, local newspapers, radio, other farmers and dealers) by responding to the 43-item check list, producing some 5,000 responses in all. Notes were also made of any comments given or questions asked by the respondent about the item scales.

With the ratings thus obtained, the next question was whether there were characteristic ways in which farmers viewed the sources. The methodological problem was basically one of (1) examining how each scale response was intercorrelated with each of the others and (2) grouping responses into relatively highly intercorrelated "clusters." Such "clusters" would then represent the different ways of viewing or evaluating such sources. Factor analysis (the centroid method with a verimax rotation) provided the needed statistical technique.[2] A six-factor solution provided four distinct views of farm information sources plus two possible nuclei of others. Clusters of item scales that evolved were described as *utility, affectivity, practicality,* and *accessibility.* These "clusters" are referred to statistically as factors and more generally as *dimensions or components of meaning* in this study. The item scales comprising these factors and their factor loadings are listed in Appendix A, Table II.

Only 12 of the original 43 items were chosen to describe the factors which are listed in the table. Only those that most clearly represented or described the factors were chosen. The number selected to describe each was in proportion to the amount of the common variance each factor contributed—hence, four were chosen to represent factor I, three to represent factor II, and two each to represent factors III and IV. A detailed discussion of the rationale and method used for selecting the item scales for inclusion in the standardized measures of meaning components (Phase II) is included in Appendix II.

Dimensions of Meaning

As a final step in the conceptualization phase, it was necessary to look at the nature of the components of meaning or factors. Interest here is twofold: (1) How important is each dimension in the total semantic space (all the identifiable ways of viewing these concepts) and (2) What notions compose the dimensions?

1. *Utility.* The utility factor, being the strongest cluster, produced more highly intercorrelated scales than any of the others. The four scales selected for describing the utility view, all loading .70 or more on the factor, were *good-bad, trustworthy-untrustworthy, knowledgeable-not knowledgeable,* and *up to date-out of date.*

Stated in positive terms, a source regarded as having high utility had to be trustworthy, knowledgeable, and up to date, and a "good" source of farm information (See Table 1).

Many of the other scales in the cluster were highly correlated with the ones chosen, including the scientific-unscientific view. Although not used as part of the factor description, the latter was retained nevertheless because of its central meaning and concern to the institutionalized systems of developing and disseminating scientific farm information.

TABLE 1

LOADINGS OF SELECTED ITEM SCALES ON FACTORS

Item Scales	Item Number	Factors (Dimensions of Meaning) Utility I (Loadings)	Affect-ivity II (Loadings)	Practi-cality III (Loadings)	Access-ibility IV (Loadings)
Good - bad	3	-.75	.19	.26	-.10
Unhandy - handy	4	.27	-.03	.18	.64
Trustworthy - untrustworthy	7	-.71	.43	.27	.08
Knowledgeable - not knowledgeable	9	-.78	.23	.18	-.13
Up to date - out of date	15	-.72	.04	.06	-.26
Inconsiderate - considerate	19	.29	-.67	-.17	.07
(Scientific - unscientific)*	20	-.60	.23	.27	-.08
Unavailable - available	21	.34	-.21	-.35	.55
Cool - warm	25	.14	-.72	-.16	.15
Approachable - unapproachable	28	-.19	.79	.14	-.17
Undependable - dependable	36	.37	-.40	-.71	.08
Unwise - wise	41	.34	-.24	-.74	.15

*Not used in factor description.

2. *Practicality.* This factor, third in strength, showed a close affinity to the utility view in this study and appeared with it as a single factor in a study by Lee, also involving Missouri farmers.[3] It was characterized by the undependable-dependable, unwise-wise scales, both loading .71 or over on this factor. The high loading senseless-sensible scale also reflected this dimension of meaning but was not included because it was very highly intercorrelated with the unwise-wise scale. *Thus, the factor prescribed that a practical information source had to be wise and dependable.*[4] An additional scale representing this factor that could have been used was safe-risky.

3. *Affectivity.* The second factor in order of strength was referred to as *affectivity* (feeling). Scales selected as most appropriate for describing it were considerate-inconsiderate, cool-warm, and approachable-unapproachable.

Stated in positive terms, an information source rating high on the affectivity component view had to be considerate, warm, and approachable.

The item next in order for possible inclusion was the friendly-unfriendly scale. This was the one most characteristic of Lee's friendliness factor.[5]

4. *Accessibility.* The fourth factor in order of strength was named *accessibility.* The two scales used to describe this factor were the *handy-unhandy* and the *available-unavailable* ones. Lee found a similar factor referred to as convenience. Although some of the adjective bi-polar scales in Lee's study tended to shift to other positions in his reassessment of factor content, the central unhandy-handy designation remained stable. This was also the central scale used in describing our accessibility factor. If an additional scale were to be chosen to describe this factor, the difficult-easy view would seem to be a logical first choice by the standards stated.[6] Although handy and accessible, unhandy or inaccessible may represent psychological points of view quite aside from the physical reality, they are likely to be real in their consequences to responses that people make concerning information sources.

5. *Other Dimensions.* Three items in addition to those for defining the factors were included. The scientific-unscientific item scale was included, mainly because of its special significance in meaning for the highly institutionalized systems for developing farm information and disseminating it through special social systems. Being scientific is a central concern to both types of systems. Even though this scale was more closely associated with the utility view than any of the others, it was not quite high enough to qualify as an item to be classified as a part of the factor.

Two more items standing somewhat alone in the factor analysis, although a little more closely related to the feeling or affectivity view than to the others, were also included. These were close-distant and welcome-unwelcome scales. These two item scales would seem to be particularly appropriate in situations where other persons are viewed as sources of farm information. Thus, in some cases the user of an information source may sense that he is pleasing someone by asking their advice or reading one of his publications.

This could be one reason for using a farm information source. Also, with other persons matters of social distance are always relevant. This refers to how close a person is willing to allow another as an information source and an associate. In rare cases, and not among Missouri farmers, communication must be done through an intermediary only. At the other extreme, one person may be willing to tell another everything and may be perceived as one who is willing to do so. These two items were accordingly included in the last community studied as a further basis for assessing the views held of innovator and legitimator referents as sources of farm information.

The Question of Adequacy of Conceptualized Views

This section is for readers who wish to pursue questions of methodological and theoretical adequacy used in arriving at the conceptualized views held of information sources. Those who are interested primarily in substantive findings should turn directly to page 12.

Adequacy of conceptualized views is discussed under sections entitled *The diversity Base* and *Use of Factor Analysis as a Conceptualizing Tool.* Reference has already been made to prior research which attests to the general validity and reliability of the semantic differential as an instrument for assessing views held of concepts.[7] The point was also made that adequate conceptualization of the nature of views held of farm information sources required a broad base of views held. This poses questions of sample adequacy for which further consideration is in order here. Consideration must be given to three types of samples (farmers, sources, and views of sources) for the answer.

1. *The Diversity Base.* First, in regard to the sample of farmers, two fears may be expressed: (a) the number of respondents (24) is small; and (b) they were not selected according to some stratified random design which would insure statistical independence and equal probability of being selected within each stratum. The basic premise of defense, if any is needed, is that determining relevant theoretical categories of views held of farm information sources is more crucial than reducing errors of estimate of parameter values (views held) in some universe of farmers. This being the case it was more important to include all theoretically relevant groups than to get a sizeable representative sample of them; thus, the attempt was made to include a diversity of farmers who were expected to express a variety of views held about a variety of sources.

As Phase 1 was aimed more at conceptualizing dimensions of meaning involved in the total semantic space surrounding farm information sources, more emphasis was placed on the design for selecting adjectives which describe the concepts, and on the design for selecting concepts than on selecting farmers. It was felt that major concern should be directed to the adequacy of these designs, for without some sort of balanced design for concepts and randomization of the order of statements within subject blocks, relevant dimensions could not be abstracted no matter how many respondents were interviewed. The authors are in

accord with Stephenson who holds that large samples are not important for exploratory work as for testing hypotheses.[8]

That the sampling design for selection of subjects is weak for the purpose of inferring to a population of farmers is not squarely relevant to the purpose of the study. However, at least one replication was obtained from all theoretically relevant categories of farmers who constitute the population of farmers designated for investigation in Phase 2. Only future work will tell if all relevant categories of farmers who constitute the population of farmers designated for investigation in Phase 2 were included. Only future work will tell if all relevant categories of respondents were included, or whether there are significant interaction effects between respondents and items and concepts which the present analysis failed to discover.

2. *Use of Factor Analysis as a Conceptualizing tool.* There are perhaps two basic questions which need to be answered in a discussion of the manner in which factor analysis solutions were used as conceptualizing tools. These questions involve: (1) the invariance of the factors obtained, i.e., how well they represent the universe of factors in the content area of concern, or, to say it differently, how "good" the inferences are about the factors in the domain of content; and (2) how well the solution fits with the theoretical expectations.

Thurstone's centroid factor method, which is an approximation procedure to the preferred principle axis method for exploratory work, was applied to the matrix of correlated responses obtained from the application of the semantic differential to the 24 purposively selected respondents.[9] Six factors were extracted and rotated into simple structure. Varimax procedure, which is one analytic method for transforming an initial multiple factor solution to an orthogonal simple structure, was used in accord with Kaiser's varimax criterion. This procedure tends to lead to factorially invariant solutions approximately as "good" as the principle-axis method.[10] For questions of appropriateness of this procedure for analysis of semantic differential material, the reader is referred to Osgood. (See footnote 1).

In attempting to determine the number of factors to solve for, there seem to be three informal criteria one can employ as guidelines.[11] These are:

(1) Each factor must add at least 2% to the explained variance.

(2) Each factor must include at least one scale with a factor loading of .50 or more.

(3) The Kiel-Wrigley criterion that one should continue rotating as long as each factor contains at least three scales whose highest loadings are on that factor, with no stipulation made as to any required increase in explained variance.

The reader will note that in the six factor solutions all factors meet the first criterion, but only the first four meet all three criteria. (See Appendix A, Table 1.) Because a conservative solution was desired, which also met theoretical expectations, the decision was made to accept only the first four factors, realizing that in so doing the percent of the total variance explained is reduced from ap-

proximately 60 percent to 54 percent. The important question in the evaluation of the adequacy or validity of the factor solution, however, is the goodness of fit to the theory. Therefore, this will be discussed in more detail.

As stated, the authors originally posited the following four dimensions would be involved in the semantic space surrounding farm information sources: an instrumental dimension, an evaluative dimension, an expert-trustworthy dimension, and a social distance dimension. In looking at the profile of items which best represented each of the respective factors (those items that load .50 or above on the factor) it was felt that these were in fact the types of dimensions of meaning which the responding farmers held in regard to the information sources they judged (See Table 1).

Because the obtained solution met theoretical expectations, because the solution explained approximately 60 percent of the total variance and the residual variance appeared to be comprised of unique factors or response error, and because the procedure used displayed a high degree of invariance in the obtained factors, it was felt that the results of the conceptualization phase were valid and reliable. Therefore we felt they could be utilized for assessing the meaning of various farm information sources in a larger sample or second phase of the study.

Aside from adhering to rigid canons of empirical research for the use of factor analysis methods which the conceptualizing phase of this study seems to have met very well, there are inescapable subjective matters of adequacy that must be considered perhaps even at the expense of some of the canons of empirical adequacy. The researcher must use considerable subjectivity in choosing items to include in the factor analysis in the first place and surely is much on his own in arriving at what these factors mean, what the constituent items add up to, and what he will name them in the final analysis. Thus, rigid statistical standards may need to defer slightly to subjective considerations and the insights of the investigator.

Thus, in this study a four, a five, or even a seven factor solution may have met the above criteria and were actually tried as a basis for conceptualizing meaningful views held of information sources. Yet all three produced what appeared to be internally inconsistent components of meaning, essentially useless in providing needed insights into the problem at hand. It was the six factor solution which provided the most useful insights to the researchers. The first four factors appeared to provide what the investigators regarded as clearcut components of meaning. Even the two weaker ones (which by strictly empirical standards and in the judgment of the researchers were of insufficient magnitude to consider as factors) provided clues to views which might be pursued in subsequent studies and items which were included also in this study as potentially useful in considering information sources of a personal nature.

One cannot but wonder whether Merton in his Rovere study of the communicative behavior of influentials might have from the beginning discovered his classic local and cosmopolitan types by a two-factor solution using most or all of the characteristics he had collected about his influential persons.[12] One can fur-

ther wonder whether suggested requirements for explaining residual requirements might not have required a three or even four-factor solution resulting in much less clearcut distinctions of the classic localite and cosmopolitan classification. Thus, the plea is for some liberty for insightful researchers to exercise discretion somewhat outside of the canons of amount of variance that must be explained.

Phase II

VIEWS HELD OF INFORMATION SOURCES BY FARMERS IN OZARK AND PRAIRIE

With the conceptualizing phase of the study completed and an instrument for measuring views (dimensions) developed, the second problem was to determine how views of farm information sources varied by source and type of farmers in another sample. The specific questions of concern are enumerated in the introductory section of this bulletin. The order of presentation in this section is to first deal with matters of method and then to present findings growing out of the second phase of the study.

Methods

1. *The measurement scales and their use.* From the first (conceptualization) phase of the study 14 bi-polar adjective scales (items) were selected to constitute the instrument for measuring the views held of information sources by additional samples of farmers (11 to represent the four major factors and three for reasons previously described). These were:

UTILITY
- Bad-good
- Untrustworthy-trustworthy
- Not knowledgeable-knowledgeable
- Out of date-up to date
- (Unscientific-scientific)

AFFECTIVITY
- Inconsiderate-considerate
- Cool-warm
- Unapproachable-approachable

PRACTICALITY
- Undependable-dependable
- Unwise-wise

ACCESSIBILITY
- Unhandy-handy
- Unavailable-available

OTHER (Relational)
- Unwelcome-welcome
- Distant-close

Although time limitations dictated that the instrument be used to obtain the views of no more than five concepts (farm information sources) from any farmer, views on eight were consistently and alternately obtained in one community—county extension agents, innovator and ligitimator referents, agricultural chemical dealers, feed dealers, farm magazines, radio and television. Only five were considered in the other community.

The general procedure was to have samples of farmers rate five of the eight designated farm information sources in terms of the 14 selected item scales, each with seven intervals between the two polar extremes. Thus, with reference to the good-bad scale a farmer was asked to check where he rated a particular farm information source on the seven-scale range between good and bad as follows:

Good ___:___:___:___:___:___:___ Bad

Ratings were accordingly assigned on each of the scales for each specified farm information source. These ratings and their composite averages for factors comprise the data from which further analysis was undertaken.

2. *The communities studied.* Interviews with 228 farm operators in Ozark and 175 in Prairie provided the data used in Phase II of the study. Ozark is located in the Ozark region of south Missouri referred to as Social Area D by C. L. Gregory[13] (See Figure 1). The community selected was regarded as roughly representative of the area which has been and is characterized by a shift from general or low level commercial farming to an emphasis on dairy enterprises and thence often to or simultaneously with part-time farming. Some earlier residents had switched from lumber and logging enterprises to subsistence farming. In many cases farmers had moved from the area or had shifted almost completely to off-farm employment. The soil and general topography of the area are much less

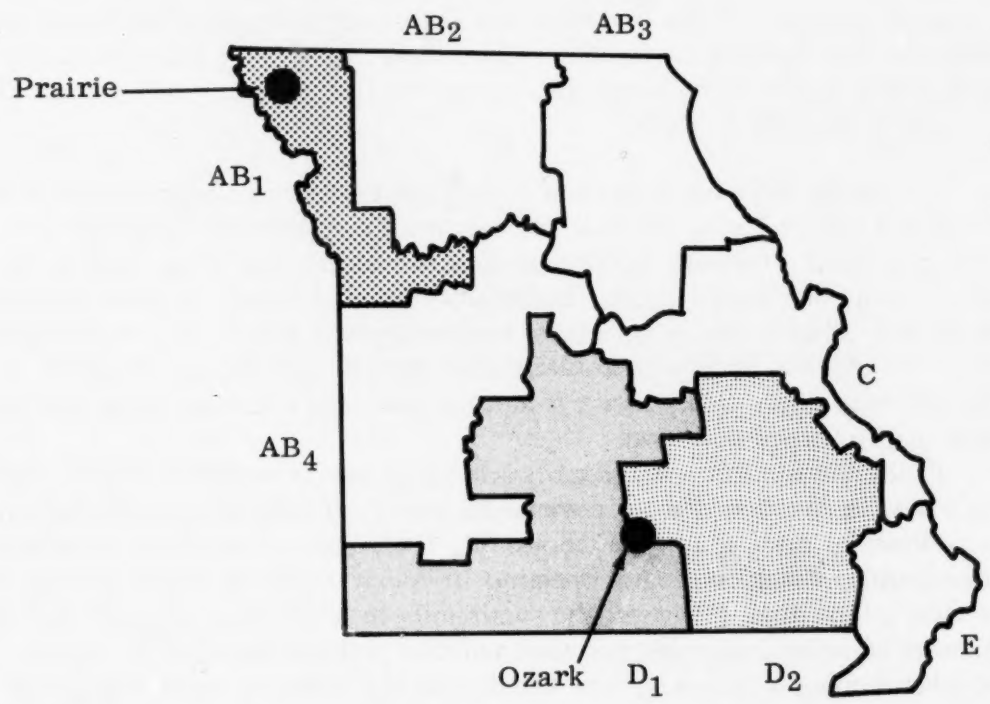

Figure 1. Location of Ozark and Prairie with reference to rural social areas in Missouri.

favorable for commercial farming than the state average. In fact, the county in which Ozark is located is among the economically disadvantaged of the state. The older farmers in the area tend to be those who have demonstrated a capacity for accepting changes forced by economic necessity and adjusting to them.

Prairie is located in a contrasting area where conditions for commercial farming are generally well above the state average, referred to as rural Social Area AB1 by C. L. Gregory. Survival and economic well being as a farmer requires little more than doing better what farmers have been doing for a long time; namely, growing corn and soybeans and feeding cattle and hogs for local markets. Few farmers or their family members were engaged in off-farm work for pay.

In each case community boundaries were determined by asking knowledgeable persons to indicate where farmers along the likely periphery of the community went most frequently for the goods and services they needed. Those who were designated as coming most frequently to the town which served as the service center of the study community were regarded as inside; those who went elsewhere most frequently were regarded as outside. Little difficulty was encountered in these delineations. Furthermore, subsequent reference to farmers' own views of where they went most frequently for needed goods and services showed a high degree of agreement in the original delineation.

All farm operator heads of households were interviewed. The operational definition of a farmer was roughly gross sales of farm products of $1,000 or more during the year prior to the interview; this quite aside from any off-farm work of either the farm operator or members of his family. Thus, many part-time farmers were included and indeed many with a very low committment to commercial farming, particularly in Ozark.

3. *Coverage.* Since one important central concern was to compare views held of persons regarded as usually first to adopt new farm practices (innovator referents) and those who were regarded as most influential in helping others to decide to adopt new farm practices (legitimator referents), farmers in both communities were asked to rate each of these referent types as sources of farm information.[14] In addition, all farmers in Ozark were asked to rate the county agent's office, the most direct agency source commonly used, and two mass media sources, farm magazines and television.

Prairie was more or less arbitrarily selected as the community in which farmers would be questioned about commercial sources of farm information. Several considerations made it a logical choice: (1) Preliminary observation revealed a considerable inclination of farm operators in Prairie to rely on dealers as sources of farm information, (2) it was the community in which the highest degree of commercialization in farming prevailed and thus probably more nearly represented what farming is becoming than Ozark; and (3) if there is an emerging inclination, as some have suggested, to downgrade local public agency sources of farm information for the more direct public and commercial ones, it would likely be more manifest in Prairie than in Ozark.

Since many lines of commercial communication operate in any community, views are likely to vary from one line or channel to another. This was further complicated in Prairie by the fact that the agricultural chemical dealers included (1) a highly esteemed ex-county extension agent who had been the agent in the area for many years and (2) a present vocational agriculture teacher who is a long standing citizen of the community. Both surely were able to benefit substantially by a firm increment of esteem as farm information sources by virtue of their official positions and the vocational agriculture teacher also as an established member of the community.

On the other hand, the situation for feed dealers in the immediate community was quite different. None had a background of such professional experience. These distinctions provided a convenient and necessary difference to be recognized. Thus, farmers were asked to apply the bi-polar adjective scales to both chemical and feed dealers. With the need for allocation of questioning about information sources, half of the farmers in Prairie were asked to rate television, agricultural chemical dealers, and "feed dealers in general" and the other half farm magazines, radio, and the county extension office. All, as indicated previously, were asked to rate innovators and legitimators as sources of farm information.

Findings

Four central questions are posed in the analysis of data for this, the second phase of the study.

1. Do farm operators see farm information sources as being different in quality?
2. If so, do they view them differently in terms of factored components of meaning (utility, practicality, affectivity, and accessibility).
3. To what extent can differences in views held of the sources be attributed to one or several of these dimensions of meaning (factors).
4. To what extent views held are a function of various personal characteristics of the viewer.
5. To what extent views held are a function of (related to) patterns of source usage.

These questions are treated in order looking first at each community separately, then at community differences and similarities. Questions 1 and 2 are treated under the heading *General view of sources;* question 3 under *Dimensional views;* question 4 under *Variation by characteristics of the viewers;* and 5 under *Use as a function of views held.*

1. ***The general view of sources.*** This section is concerned with the first two questions posed above; i.e., (1) whether or not farmers in Ozark and Prairie considered farm information sources as being different in overall quality and (2) whether they recognized them as being different on the specific qualities of util-

ity, practicality, affectivity, and accessibility. In accord with the general pattern of analysis, data are first presented for each community; secondly, community differences are noted.

Tables 2 and 3 present the basic data for Ozark and Prairie communities, respectively. The dimensions of meaning extracted from Phase I of the study and the component scales selected to represent these dimensions are listed down the left margin of the table. The information sources being rated appear across the top. Each table contains (1) the average score for each source on each scale as well as (2) the dimension averages and (3) the overall computed evaluation—referred to as the *general acceptability score.*

a. *In Ozark.* Looking at the general acceptability score in Table 2, one can quickly see that in Ozark the respondents value television as a source of farm information the lowest of all, farm magazines next, and then county extension agents, innovator referents. Persons named as most influential in own farm practice adoption decisions (legitimator referents) were rated the highest. Since these differences were all statistically significant at the .05 level, it can be concluded that each source was viewed by Ozark respondents as having different overall qualities from all others[15] (See Table 3).

Looking next at the dimension averages in Table 2, the reader will note more specifically a rank order progression of increasing value on the utility, practicality, and affectivity dimensions as one moves from evaluations given of television at the low end of the continuum to evaluations of legitimator referents at the high end. However, the fourth dimension, accessibility, did not follow this pattern. Legitimator referents were seen as most accessible, farm magazines next, then innovator referents, county extension agents, and finally television as least. This seems to be in accord with the reality of the situation. A visit or even a telephone call to the county agent's office involves overt effort; not mere passive exposure. In addition, both county extension agents who are outsiders and innovators who by definition are deviants may be separated from would-be information seekers by social distance. Although conveniently located, television may actually be quite inaccessible for securing farm information; viewing requires concentration of attention that may be quite incompatible with doing other things at the same time. Perhaps even more important, farm information programs are not likely to be available when farmers ordinarily have time to view them.

b. *In Prairie.* Table 4 depicts the pattern of evaluation of information sources in Prairie. Judging from the general acceptability score farmers in Prairie had the least positive feeling toward television. A near neutral (or at least not positive) evaluation is indicated by the number 4 score. Farm magazines, radio, agricultural chemical dealers, feed dealers, county extension agents, innovator referents, and legimator referents followed in ascending order.

Tests of significant differences for Prairie were complex since two sets of respondents' evaluations were involved. As noted earlier one randomly selected set of respondents evaluated television, agricultural chemical dealers, and feed

TABLE 2
FARM OPERATORS IN OZARK CLASSIFIED BY AVERAGE EVALUATIVE SCALE SCORES ON ITEMS AND FACTORS ASSIGNED DESIGNATED SOURCES OF FARM INFORMATION

Views (Factors) Items	Information Sources: Television (Score) (N=223)	Farm Magazines (Score) (N=216)	County Extension Agent (Score) (N=219)	Innovator Referents (Score) (N=174)	Legitimator Referents (Score) (N=176)
UTILITY	5.17	5.75	5.99	6.11	6.15
Bad - good	4.94	6.00	6.06	6.32	6.51
Untrustworthy - trustworthy	5.11	5.61	5.92	6.19	6.44
Not knowledgeable - knowledgeable	5.00	5.88	5.99	6.24	6.31
Out of date - up to date	5.63	5.52	5.98	5.93	5.81
(Unscientific - scientific)*	(5.41)	(5.77)	(6.09)	(5.89)	(5.70)
PRACTICALITY	5.24	5.51	5.88	6.01	6.28
Undependable - dependable	5.24	5.60	5.95	6.12	6.39
Unwise - wise	5.24	5.42	5.81	5.91	
AFFECTIVITY	4.94	5.16	5.64	5.89	6.18
Inconsiderate - considerate	5.06	5.37	5.74	6.04	6.36
Cool - warm	4.85	4.97	5.47	5.80	6.07
Unapproachable - approachable	4.90	5.14	5.71	5.85	6.12
ACCESSIBILITY	5.43	6.08	5.82	5.98	6.28
Unhandy - handy	5.22	6.04	5.58	5.90	6.26
Unavailable - available	5.63	6.12	6.05	6.07	6.29
GENERAL ACCEPTABILITY	5.20	5.62	5.83	6.00	6.22

*Not included in computing the utility score

TABLE 3
TEST FOR DIFFERENCE OF VIEWS OF INFORMATION SOURCES AMONG OZARK FARMERS

ANALYSIS OF VARIANCE

Source of Variation	Sum of Squared Deviation	Degrees of Freedom	Mean Square
Information Source	61.46	4.0	15.36
Farmer	874.00	220.0	3.97
Error	586.05	781.0	0.75
Total	1521.51	1005.0	--

F Ratio = 20.48; Statistically significant at the .01 level

MULTIPLE RANGE MEAN SEPARATION

Information Source	Mean Value
Television	5.20
Farm Magazines	5.62
County Extension	5.83
Innovator Referents	6.00
Legitimator Referents	6.22

SIGNIFICANTLY DISTINCT CLUSTERS AT .05 LEVEL OF CONFIDENCE

Television	Farm Magazines	County Extension	Innovator Referents	Legitimator Referents

TABLE 4

FARMERS IN PRAIRIE CLASSIFIED BY AVERAGE EVALUATIVE SCALE SCORES ON ITEMS AND FACTORS ASSIGNED DESIGNATED SOURCES OF FARM INFORMATION

VIEWS (FACTORS) Items	Information Sources*							
	Television (1) (Score) (N=89)	Farm Magazines (2) (Score) (N=84)	Radio (2) (Score) (N=84)	Agricultural Chemical Dealers (1) (Score) (N=90)	Feed Dealers (1) (Score) (N=89)	County Extension Agent (2) (Score) (N=90)	Innovator Referents (Score) (N=167)	Legitimator Referents (Score) (N=167)
UTILITY	4.93	5.47	5.55	6.05	5.98	6.12	6.23	6.50
Bad - good	4.17	5.53	5.66	6.11	6.03	6.12	6.13	6.58
Untrustworthy - trustworthy	4.98	5.28	5.53	5.88	5.86	6.27	6.29	6.67
Not knowledgeable - knowledgeable	4.94	5.59	5.60	6.10	6.01	6.15	6.23	6.47
Out of date - up to date	5.63	5.49	5.42	6.12	6.01	5.92	6.25	6.29
(Unscientific - scientific)**	5.17	5.73	5.27	5.87	5.70	6.17	5.91	6.10
AFFECTIVITY	4.71	4.95	5.23	5.79	6.08	5.85	5.95	6.38
Inconsiderate - considerate	4.81	5.13	5.33	5.88	6.19	6.05	5.99	6.48
Cool - warm	4.44	4.91	5.18	5.67	5.90	5.66	5.92	6.32
Unapproachable - approachable	4.88	4.81	5.19	5.81	6.15	5.85	5.95	6.34
PRACTICALITY	5.13	5.11	5.24	5.80	5.83	6.08	6.00	6.42
Undependable - dependable	5.27	5.08	5.29	5.96	5.91	6.24	6.12	6.47
Unwise - wise	4.98	5.13	5.19	5.63	5.74	5.92	5.87	6.27
ACCESSIBILITY	4.59	5.98	5.89	6.22	6.23	6.09	6.09	6.34
Unhandy - handy	4.43	5.92	5.85	6.16	6.15	5.90	6.05	6.34
Unavailable - available	4.75	6.04	5.93	6.28	6.30	6.28	6.12	6.34
OTHER RELATIONAL								
Unwelcome - welcome	--	--	--	--	--	--	6.31	6.71
Distant - close	--	--	--	--	--	--	5.73	6.07
GENERAL ACCEPTABILITY	4.84	5.38	5.48	5.96	6.03	6.04	6.06	6.41

*Farm information sources numbered (1), referred to as "Series 1", were rated by one set of farmers and "Series 2" by another; all rated innovator and legitimator referents.

**Not included in computing the utility score

dealers. A second set evaluated farm magazines, radio and county agents. Innovator and legitimator referents were rated by both sets.[16] Commercial sources (not considered in Ozark) were added because of the increasing importance of agriculturally related industries as sources of farm information in a highly commercialized agriculture situation as in Prairie. A distinction was made between agricultural chemical, and feed dealers because of the highly professionalized character of the former in the community by comparison to the latter. One of the agricultural chemical dealers was local vocational agricultural teacher and another was a county extension agent, both of long residence and of high respect in the community. Feed dealers in the immediate trade area community generally lacked this professional quality. However, there was some inclination to use highly professionalized feed services and consultation in a nearby feed pelleting operation.

Although the procedure of dividing respondents in Prairie allowed a broader coverage of views held of farm information sources, this digression necessitated a more complex procedure for analysis. Table 4 presents the evaluations assigned by the two sets of respondents. Tables 5 and 6 contain the results of the tests of statistical significance of differences in evaluations assigned by each set of respondents. Looking at Tables 5 and 6, one sees that the F value for series one is 53.88 and for series two, 30.50. Both are statistically significant beyond the .01 confidence level, indicating that overall, the sources evaluated in the series were viewed as having significantly different meanings for the respective respondents.[17] More specifically, series one farmers in Prairie viewed television differently from all other sources (See Table 5). Likewise, they viewed legitimators as being different from the other four. However, agricultural chemical dealers, feed dealers, and innovators were viewed as being similar. For farmers in series two, farm magazines and radio were viewed as similar, but distinct from the other three. County extension agents and innovator referents were seen as similar to each other but distinct from the other three. Lastly, like "series one" farmers, legitimator referents were seen as distinct from the other three and were given the highest evaluation[18] (See Table 6).

These tests were appropriate to indicate the differences in views of the information sources within each series, but not across the two. Thus some appropriate means for making these comparisons were necessary. This was done by applying t-tests to differences in mean evaluations assigned to the information sources by farmers in one series to the mean evaluations assigned by farmers in the other. The results are reported in Table 7. Thus it will be seen that the farmers in the two series viewed (1) farm magazines as being different in quality from television, agricultural chemical dealers, and feed dealers; (2) radio as different from television, agricultural chemical dealers, and feed dealers; and (3) county extension agents as different from television, but not significantly different from agricultural chemical dealers and feed dealers.[19]

Combining the results of the "within series" analyses (See Tables 5 and 6) with the "cross series" t-tests it can be tentatively concluded that television was

TABLE 5

TEST FOR DIFFERENCE OF VIEWS OF INFORMATION SOURCES AMONG PRAIRIE FARMERS, SERIES 1

ANALYSIS OF VARIANCE

Source of Variation	Sum of Squared Deviation	Degrees of Freedom	Mean Square
Information Source	122.40	4.0	30.60
Farmer	131.71	88.0	1.50
Error	195.36	344.0	0.57
Total	449.48	436.0	--

F Ratio = 53.88; Statistically significant at the .01 level

MULTIPLE RANGE MEAN SEPARATION

Information Source	Mean Value
Television	4.84
Agricultural Chemical Dealers	5.96
Feed Dealers	6.03
Innovator Referents	6.06
Legitimator Referents	6.41

SIGNIFICANTLY DISTINCT CLUSTERS AT .05 LEVEL OF CONFIDENCE

Television	Agricultural Chemical Dealers Feed Dealers Innovator Referents	Legitimator Referents

TABLE 6

TEST FOR DIFFERENCE OF VIEWS OF INFORMATION SOURCES AMONG PRAIRIE FARMERS, SERIES 2

ANALYSIS OF VARIANCE

Source of Variation	Sum of Squared Deviation	Degrees of Freedom	Mean Square
Information Source	52.10	4.0	13.02
Farmer	212.19	84.0	2.53
Error	141.32	331.0	0.43
Total	405.61	419.0	--

F Ratio = 30.50; Statistically significant at the .01 level

MULTIPLE RANGE MEAN SEPARATION RESULTS

Information Source	Mean Value
Farm Magazines	5.38
Radio	5.48
County Extension Agent	6.04
Innovator Referents	6.06
Legitimator Referents	6.41

SIGNIFICANTLY DISTINCT CLUSTERS AT .05 LEVEL OF CONFIDENCE

Farm Magazines Radio	County Extension Agent Innovator Referents	Legitimator Referents

TABLE 7

TESTS OF DIFFERENCES OF EVALUATIONS GIVEN TO SERIES ONE INFORMATION SOURCES IN COMPARISON TO SERIES TWO INFORMATION SOURCES

Series One Sources	Series Two Sources	T-Test	Degrees of Freedom
Farm Magazines	Television	3.75	172
	Agricultural Chemical Dealers	-4.14	172
	Feed Dealers	-4.65	172
Radio	Television	4.07	172
	Agricultural Chemical Dealers	-3.53	172
	Feed Dealers	-3.99	172
County Agents	Television	7.93	172
	Agricultural Chemical Dealers	0.60*	172
	Feed Dealers	0.27*	172

*Not statistically significant

viewed in Prairie as distinct from the other seven information sources; that legitimators were viewed as distinctly different; that radio and farm magazines as a "cluster" were viewed distinct from the others; but that feed dealers, agricultural chemical dealers, county agents, and innovators were seen as being similar.

c. *Comparison of views held.* In regard to community comparisons, legitimators (persons named as most influential in own farm practice adoption decisions) were rated highest in esteem (general acceptability) in both communities, although somewhat higher in Prairie than in Ozark. Also, mass media in both communities were rated low, with television being lowest in both cases. Innovators were rated second highest in Ozark, but in Prairie a combination of personal sources, including innovators, commercial dealers, and county extension agents, seen as similar in acceptability, was rated second highest in order. In Ozark, the county extension agent was seen as different. The tendency of farmers in Prairie to place the county extension agent, feed dealers, and agricultural chemical dealers in the same general acceptability range as innovators, and as collectively lower than legitimators, would appear to be a significant finding.[20] This is in contrast to farmers in Ozark who made a major distinction between peers (other farmer referents) and professional sources (county extension agent).

In comparison to personal sources generally, mass media were downgraded somewhat more in Prairie than in Ozark. The largest absolute acceptability rating difference for any source between the communities was for television (5.20 in Ozark and 4.84 in Prairie). A major part of this difference in view was that farmers in Ozark were not so much bothered about the accessibility dimension of television as those in Prairie. This could be a reflection of the less stringent time demands of a pasture-livestock economy compared with row-crops; also, to the concentration of heavy work loads in dairying (common in Ozark) at times of

the day when farm information programs are not telecasted in contrast to Prairie where daily peak work-loads were more likely to interfere with television viewing. There probably was a stronger tradition of television farm programming by well-known and locally esteemed farm radio personalities who had gained public acceptance prior to the advent of television in the Ozark viewing area than in Prairie. This could partly account for the differences in evaluations.

The tendency for farmers in Prairie to assign a greater range of ratings than those in Ozark was also significant. This indicated a tendency toward sharper discrimination of views held of farm information sources and more differentiation in qualities attributed to them by the Prairie farmers than those in Ozark. This may be seen by comparing the general acceptability scores in Tables 2 and 4. For example the rating range used on the general acceptability was 1.02 in Ozark compared to 1.57 in Prairie. An even larger range occurred for the utility and accessibility views with substantial differences in the same direction for affectivity and practicality views.

2. Dimensional views. The second research question posed in the Phase II analysis was whether the respondents employed different dimensions of meaning in evaluating sources. Even though four dimensions of meaning (factors) were derived from the first phase of the study and used in the second phase, it is possible that all farmers in all places do not differentiate sources in terms of them, or if they do, they may not emphasize all factors equally. It is to this kind of general question that this section is devoted. Two kinds of evidence were sought: (1) possible general tendency to rate information sources differently on the same dimensions of meaning (factors) and (2) tendencies to emphasize one dimension more than another in rating different sources. Evidence concerning each is presented in the indicated order. In regard to the first it was reasoned that respondents should tend to evaluate all sources consistently high or low on all 12 scales, if the different dimensions carried no special meaning, but would tend to assign different ratings if they did carry special meaning.

a. *Of Prairie respondents.* Looking first at across-source averages on factors (dimensions of meaning) entered in Table 8 for Prairie the reader will see that there were differences in average ratings assigned to the components in rating the eight information sources: accessibility (5.90), utility (5.83), practicality (5.71), affectivity (5.63).

The next question was whether these relatively small differences were large enough to be statistically significant. Two tests were conducted. First the data were submitted to an analysis of variance test to see if there were overall significant differences among the set of mean evaluations on the four factors. (Dimensions of meaning extracted in Phase I were considered as "treatments" for the analysis.)

Table 8 shows an F value of 16.72, which is significant beyond the .01 level of probability of occurrence by chance alone. This means that the respondents did rate the sources differently on the various dimensions, and that they rated

TABLE 8

TEST FOR DIFFERENCE OF DIMENSION OF MEANING
USED TO EVALUATE VARIOUS INFORMATION SOURCES BY PRAIRIE FARMERS

ANALYSIS OF VARIANCE

Source of Variation	Sum of Squared Deviation	Degrees of Freedom	Mean Square
Dimension of Meaning	7.79	3.0	2.60
Farmer	396.86	173.0	2.29
Error	80.60	519.0	0.16
Total	485.25	695.0	--

F Ratio = 16.72; Statistically significant at the .01 level

MULTIPLE RANGE MEAN SEPARATION

Information Source	Mean Value
Affectivity	5.63
Practicality	5.71
Utility	5.83
Accessibility	5.90

SIGNIFICANTLY DISTINCT CLUSTERS AT .05 LEVEL OF CONFIDENCE

Affectivity	Utility
Practicality	Accessibility

them significantly higher on some of the criteria (dimensions) than on others. The next question was on which specific dimensions were significantly different evaluations assigned. To test this, the data were submitted to a multiple "t" test.[21] This revealed that no significant distinction was made between accessibility and utility, with average scores of 5.90 and 5.83, respectively. Likewise, the factor average for practicality (5.71) was not significantly different from affectivity (5.63). (See Table 8.) This indicates that farmers in Prairie tended to evaluate farm information sources equally high on affectivity and practicality, but not as high as on accessibility and utility.

Thus, in terms of the magnitude of ratings on the factors, farmers in Prairie were most satisfied with the accessibility of sources, second with their instrumental qualities (perceived utility and practicality) and finally with their feelings of warmth and considerateness of the sources (affectivity). Yet the reader must recognize that despite statistical significance of differences in ratings on components of meaning, they were generally small. An important consideration is that most of the ratings assigned were indeed quite high; roughly in the range of 5.5 to 6.5 on a seven point scale.

b. *Of Ozark respondents.* The aggregate ratings on meaning qualities assigned by Ozark respondents followed the same pattern as in Prairie; i.e., accessibility (5.92), utility (5.83), practicality (5.76), and affectivity (5.53). (See Table 9.) Again by analysis of variance procedure, it is demonstrated that these dimensions

TABLE 9

TEST FOR DIFFERENCE OF DIMENSIONS OF MEANING USED TO EVALUATE VARIOUS INFORMATION SOURCES BY OZARK FARMERS

ANALYSIS OF VARIANCE

Source of Variation	Sum of Squared Deviation	Degrees of Freedom	Mean Square
Dimension of Meaning	14.00	3.0	4.67
Farmer	1592.24	222.0	7.17
Error	115.43	654.0	0.18
Total	1721.67	879.0	--

F Ratio = 26.45; Statistically significant at the .01 level

MULTIPLE RANGE MEAN SEPARATION

Information Source	Mean Value
Affectivity	5.53
Practicality	5.76
Utility	5.83
Accessibility	5.92

SIGNIFICANTLY DISTINCT CLUSTERS AT .05 LEVEL OF CONFIDENCE

Affectivity	Practicality Utility	Accessibility

of meaning provided separate criteria for making judgments about the farm information sources considered. This was indicated by a statistically significant F-value of 26.45. Thus the dimensions of meaning extracted from Phase I made a significant difference in the way the information source was evaluated.

A multiple "t" test further revealed no significant differences between the practicality and utility ratings. However, differences did occur between affectivity and accessibility ratings. These two in turn were different from the other two. Thus the empirically derived hierarchy from high to low became (1) *accessibility*, (2) *utility* and *practicality* (as kind of an instrumental dimension) and (3) *affectivity*.

c. *Comparion of differentiated views.* As in Prairie, the Ozark respondents evaluated information sources differentially on the dimensions specified in Phase I of this study. This indicated that they recognized separate dimensions for viewing farm information sources; also that these dimensions provided different and distinct criteria by which they judged the sources. In both communities farmers tended to rate them highest on the accessibility dimension, second highest on instrumental qualities (utility and practicality), and third on affectivity.

This suggests that farmers were most favorably disposed to the adequacy of the accessibility quality of the farm information sources considered, and least to affectivity. This may be something of a latent vote for higher utility and practicality standards of farm information sources.

d. *Interaction of dimension of meaning and information source evaluated.* This analysis was directed to the question of whether there was any inclination for predominant criteria to shift with the information sources being rated. In the first section, we noted that there was an overall progressively higher evaluation as one moved from the mass media sources to the personal information sources. We noted that this was true in both communities. In the second analysis, we also noted the tendency for there to be an increasingly higher evaluation given as one moves from the affectivity dimension to the accessibility dimension. Tables 2 and 4, however, also reveal shifts in evaluation. Thus, mass media received the highest evaluations on the accessibility dimension, whereas personal influences and county agents to some extent received their highest evaluations on the utility dimension. Thus, some shift in the dominant criteria with the different information sources being rated was evident. With the desire to know more about this, the problem here was to determine more specifically what these shifts were and in regard to what sources. Thus, an empirical test was needed to determine whether differences in views held of the sources could be attributed to one dimension of meaning; i.e., the utility, the practicality, the affectivity, or the accessibility aspect, or whether it took several dimensions to account for the differences; also whether this varied by sources. An appropriate technique for this analysis is what the statistician calls a test for interaction effects.[22]

Table 2 presents the basic data for Ozark. The columns for television and farm magazines show these were rated highest on the accessibility dimension and lowest on affectivity. County agents and innovators were rated highest on the utility dimension and lowest on affectivity. Legitimator referents were rated equally high on accessibility and practicality; lowest on utility. The question is to what extent the dimensions upon which the highest evaluations were given shifted significantly with the information source being rated; i.e., was there an interaction between the type of evaluation given and the information source to which it was given?

Table 7, Appendix A, presents the results of the analysis for interaction effects for Ozark.[23] One can see that the sum of squares for interaction was large, as was the mean square, indicating that there were definite tendencies for Ozark respondents to use certain criteria and not others in viewing the sources. Thus, there was an inclination to give mass media highest evaluations on the accessibility aspects; also a tendency to give county agents and innovator referents highest evaluations on utility dimensions. However, the "F" value for interaction effects was not significant. This is not to say that with a better procedure the dominant tendency to rate mass media sources higher on the accessibility aspect and to rate innovator referents and county agents on the utility criteria would not be significant. Theoretically, one feels the stated interaction is significant. This set of data simply does not substantiate it.

In Table 4, practicality of television receives the highest evaluation in Prairie; accessibility apects are given the lowest evaluation (surprisingly this is the

opposite of what was found in Ozark). Feed dealers and agricultural chemical dealers were rated highest on accessibility and lowest on practicality. Legitimator and innovator referents, the more personal referents, were rated highest on utility. One can see in Appendix A, Tables 8 and 9, that though the sums of squares and means squared for interaction were substantial, indicating a definite tendency to evaluate certain of the information sources higher on one set of criteria than on others, the F ratio was not large enough to be significant in either case.

Even though none of the covariation of ratings with information sources proved to be significant, perhaps a few community differences should be pointed out. In both communities the main basis for evaluating personal information functionaries—county extension agents, legitimator referents and innovator referents—was their perceived utility. The only exception was an inclination of Ozark farmers to rate their legitimator referents slightly higher on the practicality and accessibility dimensions than on the utility dimension. Secondly, dealers in Prairie and mass media in both communities—radio, farm magazines—were rated highest on accessibility and lowest on affectivity.

In general, however, the conclusions reached in sections b and c above must remain without further qualifications as none of the attempts to show a shift in predominant criteria with the information source being rated proved to be significant. Thus, it must be concluded that in the rating of the various information sources, all criteria have to be taken into account. Further, although there was a definite tendency for higher evaluations to be given on certain dimensions to certain information sources and not others, this tendency was not significant.

3. Variation by Characteristics of the Viewers. The question posed in this section was how do views of farm information sources vary with selected characteristics of the viewers; namely, age of the farm operator, his modernism-traditionalism orientation, his farm practice adoption level, his integration into the influence structure of the community and his innovative tendencies. Age was included because it was reasoned that any tendency to view farm information sources differently from the past ought to appear first and most in the thinking of the young farmers. The modernism-traditionalism characteristic was expected to parallel changes in agricultural development, and views associated therewith. Farm practice adoption level is relevant in the sense that it is a measure of the competence of a farmer in his chosen occupational role. Integration into the influence structure (mentions as being most influential in the adoption decisions of others) and innovative tendencies (mentions as being usually first to adopt new farm practices) are characteristics directly relevant to the communication of scientific farm information and exercise of influence among farmers.

Comparisons on each of these variables were made between the approximate upper and lower 16 percent on each variable or more specifically those respondents falling beyond one standard deviation from the mean in either direction. Thus in Ozark 60 farmers were rated as old and 40 as young, omitting those in between from the comparison.

These comparisons for Ozark are presented in Table 10. Thus, is can be seen that old farmers consistently rated farm information sources higher than young ones both in the aggregate and in terms of the factored dimensions of meaning. The only exception was that old farmers regarded their legitimator referents as having less utility than the younger ones. This general downgrading of information sources by young farmers may be reflection of their more critical inclinations. The tendency for young farmers to upgrade legitimator referents as sources may be attributed to a greater need for competent advice growing out of their economically less secure position. On the other hand, the older farmers may use legitimator referents more for status considerations or reinforcement of decisions already made than for actually getting advice.

Table 11 contains the mean evaluations given to various farm information sources by farmers who were classified as high and low in terms of the number of applicable farm practices they had adopted. Two major results were clearly evident. The first was that high level adopters tended to rate mass media sources lower than low level adopters did. This was especially noticeable for farm magazines and television, both in the general view and in the ratings for components of meaning. Differences in ratings accorded county extension agents by low and high level adopters were not significant. High adopters rated their legitimator referents higher than low level adopters, a tendency also evident in each of the dimensional averages except practicality, where the reverse occurred. Strangely, high adopters rated innovators lower as farm information sources than did low adopters. Possibly high adopters were more critical of the competence of innovator referents than low level ones and thus viewed them with more skepticism as sources of farm information. This inclination was in fact demonstrated in an earlier Missouri study.[24] On the other hand, low adopters may view innovators as persons they would like to emulate and accordingly may also value them more as potential sources of farm information.

Farmers named by others as usually first to adopt new farm practices (innovators) may be expected to favor direct and high expertise sources of farm information over the mass media and other sources designed primarily for the hypothetical "average" farmer. Congruent with this expectation, they tended to downgrade the mass media both generally and on factored views (See Table 12). This was particularly true for television.

The county extension agent, the College of Agriculture representative in the local community who tends to cater to major crop and livestock interests, was neither down or upgraded by innovator referents in Ozark. However, they did upgrade persons of their own kind as farm information sources, indicating an affinity to innovatively inclined farmers. This tends to support the thesis that innovators are not social isolates but instead have their own reference groups; perhaps this explains why these referents are also perceived as being less accessible (as indicated by the tendency of high mention innovators to downrate those of their own kind on the accessibility factor).[25] Such persons by definition and by the reality of the situation are few in number and necessarily quite scattered in terms

TABLE 10

YOUNG AND OLD FARM OPERATORS IN OZARK CLASSIFIED BY AVERAGE SCALE SCORES ON ITEMS AND FACTORS ASSIGNED DESIGNATED SOURCES OF FARM INFORMATION

VIEWS (FACTORS) Items	Information Sources: County Extension Agent		Farm Magazines		Television		Innovator Referents		Legitimator Referents	
	Young (N=40)	Old (N=60)	Young (N=40)	Old (N=62)	Young (N=39)	Old (N=59)	Young (N=32)	Old (N=45)	Young (N=30)	Old (N=42)
UTILITY	5.97	6.11	5.82	6.13	5.23	5.93	6.36	6.66	6.27	6.17
Bad - good	6.03	6.36	6.18	6.17	4.95	6.18	6.30	6.75	6.39	6.44
Untrustworthy - trustworthy	6.10	6.27	5.58	6.08	5.33	5.82	6.48	6.50	6.52	6.22
Not knowledgeable - knowledgeable	5.93	6.45	5.88	6.17	4.97	5.73	6.21	6.75	6.23	6.00
Out of date - up to date	5.83	5.36	5.65	6.08	5.67	6.00	6.45	6.63	5.94	6.00
(Unscientific - scientific)*	6.10	5.91	5.83	6.00	5.46	5.64	6.15	6.50	5.77	5.44
AFFECTIVITY	5.48	6.09	5.30	5.67	4.69	5.58	6.09	6.50	6.30	6.48
Inconsiderate - considerate	5.60	6.45	5.60	6.00	4.90	5.91	6.33	6.75	6.45	6.44
Cool - warm	5.25	5.55	5.10	5.25	4.62	5.27	5.94	6.50	6.13	6.56
Unapproachable - approachable	5.60	6.27	5.20	5.75	4.56	5.55	6.00	6.25	6.32	6.44
PRACTICALITY	5.87	6.37	5.64	5.75	5.18	5.87	6.09	6.69	6.31	6.45
Undependable - dependable	6.05	6.55	5.75	5.92	5.23	6.09	6.21	6.75	6.48	6.56
Unwise - wise	5.68	6.18	5.53	5.58	5.13	5.64	5.97	6.63	6.13	6.33
ACCESSIBILITY	5.72	6.09	6.30	6.59	5.33	6.32	5.62	6.57	6.16	6.78
Unhandy - handy	5.40	6.00	6.35	6.50	5.28	6.27	5.42	6.25	6.06	6.78
Unavailable - available	6.03	6.18	6.25	6.67	5.38	6.36	5.82	6.88	6.26	6.78
GENERAL ACCEPTABILITY	5.77	6.15	5.73	6.02	5.09	5.89	6.10	6.60	6.26	6.41

*Not included in computing the utility score

TABLE 11

FARM OPERATORS IN OZARK WITH HIGH AND LOW FARM PRACTICE ADOPTION SCORES CLASSIFIED BY AVERAGE SCALE SCORES ON ITEMS AND FACTORS ASSIGNED DESIGNATED SOURCES OF FARM INFORMATION

VIEWS (FACTORS) Items	Information Sources: County Extension Agent		Farm Magazines		Television		Innovator Referents		Legitimator Referents	
	Low (N=48)	High (N=73)	Low (N=50)	High (N=73)	Low (N=47)	High (N=70)	Low (N=31)	High (N=57)	Low (N=32)	High (N=58)
UTILITY	5.93	6.03	6.00	5.66	5.38	5.09	6.08	6.01	6.10	6.34
Bad - good	6.00	6.04	6.12	5.93	5.20	4.80	6.44	6.12	6.43	6.55
Untrustworthy - trustworthy	5.66	6.08	5.84	5.38	5.52	5.07	5.75	6.14	6.29	6.50
Not knowledgeable - knowledgeable	5.91	6.05	6.20	5.83	5.11	4.99	6.47	5.95	6.23	6.25
Out of date - up to date	6.15	5.95	5.84	5.50	5.67	5.51	5.66	5.81	5.43	6.07
(Unscientific - scientific)*	6.06	5.97	5.61	5.74	5.74	5.30	6.00	5.79	5.71	5.98
AFFECTIVITY	5.59	5.62	5.15	5.14	5.04	4.80	5.61	5.61	6.02	6.10
Inconsiderate - considerate	5.74	5.70	5.35	5.35	5.26	4.91	5.78	5.71	6.31	6.25
Cool - warm	5.34	5.48	4.78	4.85	4.96	4.78	5.38	5.52	5.83	5.95
Unapproachable - approachable	5.68	5.67	5.31	5.21	4.89	4.72	5.66	5.60	5.91	6.11
PRACTICALITY	5.90	5.93	5.64	5.39	5.19	5.22	5.96	5.81	6.23	6.17
Undependable - dependable	5.94	6.00	5.78	5.38	5.26	5.17	6.00	5.88	6.31	6.20
Unwise - wise	5.85	5.85	5.49	5.40	5.11	5.26	5.91	5.74	6.14	6.14
ACCESSIBILITY	5.86	5.74	6.19	6.10	5.88	5.30	6.19	5.74	6.24	6.32
Unhandy - handy	5.57	5.44	6.29	6.11	5.65	5.12	6.16	5.52	6.37	6.16
Unavailable - available	6.15	6.03	6.08	6.08	6.11	5.48	6.22	5.95	6.11	6.48
GENERAL ACCEPTABILITY	5.82	5.84	5.73	5.55	5.34	5.07	5.95	5.81	6.12	6.24

*Not included in conputing the utility score

TABLE 12

FARM OPERATORS IN OZARK WITH HIGH, MEDIUM AND LOW MENTIONS AS AN INNOVATOR CLASSIFIED BY AVERAGE SCALE SCORES ON ITEMS AND FACTORS ASSIGNED DESIGNATED SOURCES OF FARM INFORMATION

VIEWS (FACTORS) Items	Information Sources: County Extension Agent		Farm Magazines		Television		Innovator Referents		Legitimator Referents	
	Low (N=166)	High (N=53)	Low (N=170)	High (N=53)	Low (N=164)	High (N=52)	Low (N=117)	High (N=43)	Low (N=117)	High (N=45)
UTILITY										
Bad - good	5.98	6.03	5.79	5.54	5.07	4.81	6.17	6.20	6.28	6.22
Untrustworthy - trustworthy	6.07	6.06	6.00	5.87	4.92	4.37	6.33	6.30	6.54	6.42
Not knowledgeable - knowledgeable	5.87	6.09	5.66	5.32	4.96	4.90	6.18	6.26	6.44	6.49
Out of date - up to date	6.01	5.91	5.94	5.64	4.92	4.60	6.29	6.12	6.29	6.33
(Unscientific - scientific)*	5.95	6.06	5.56	5.34	5.47	5.38	5.87	6.12	5.84	5.64
AFFECTIVITY	6.13	5.96	5.74	5.72	5.23	5.25	5.95	5.74	5.74	5.71
Inconsiderate - considerate	5.63	5.66	5.17	5.04	4.83	4.64	5.83	6.09	6.24	6.03
Cool - warm	5.75	5.70	5.38	5.21	4.96	4.75	5.97	6.23	6.36	6.31
Unapproachable - approachable	5.46	5.49	4.96	4.91	4.76	4.52	5.76	5.91	6.17	5.82
PRACTICALITY	5.69	5.79	5.16	5.00	4.78	4.65	5.76	6.12	6.19	5.96
Undependable - dependable	5.88	5.88	5.54	5.31	5.05	5.14	6.00	6.06	6.29	6.31
Unwise - wise	5.94	5.96	5.64	5.36	5.06	5.10	6.09	6.21	6.41	6.38
ACCESSIBILITY	5.81	5.79	5.43	5.26	5.05	5.17	5.92	5.91	6.17	6.24
Unhandy - handy	5.81	5.84	6.10	5.92	5.36	4.91	6.02	5.95	6.34	5.98
Unavailable - available	5.58	5.57	6.05	5.92	5.16	4.69	5.94	5.81	6.36	6.00
GENERAL ACCEPTABILITY	6.03	6.11	6.15	5.91	5.56	5.12	6.09	6.02	6.31	5.96
	5.83	5.85	5.65	5.45	5.08	4.88	6.01	6.08	6.29	6.14

*Not included in computing the utility score

of locality. On the other hand, high mention innovators showed some inclination to independent decision by rating their own personal decisional referents (legitimator referents) somewhat lower than persons having a reputation of being slower to adopt new farm practices.

High mention legitimators seemed to be somewhat more like the rank and file farmers than the low mention ones. Both rated farm magazines about the same, but the former downgraded television (See Table 13). Likewise, the former rated the county extension agent higher than the latter. Although they accorded no appreciable deference to farmers of their own kind (i.e., other high mention influence referents), they tended to favor innovators over the more tradition-bound farmers.

Farmers of Ozark who rated high in modernism in farming (as measured by favorable disposition to the use of credit, farm management, scientific farm information, and other requirements of modern commercial farming) were more favorable than others to impersonal farm information sources (farm magazines, T.V., county agent), both on factors and in general acceptability.[26] Farmers with high scores tended to upgrade both factors and general acceptability, particularly regarding the county extension agent (Table 14). On the other hand, farmers with high modernism scores tended to be more critical of their innovator and legitimator referents in terms of general acceptability and specific factors. The only exception was a slightly higher evaluation given to legitimator referents as a utilitous source by high modernism farmers. This tendency to downgrade both referent types strongly suggests a tendency of high modernism farmers to be less inclined than the low ones to use *other farmers* as sources of farm information and more inclined to use the direct professional sources, particularly the county extension agent. However, the reader will note that this variation by modernism score occurs within the context of a generally high rating placed on own legitimator referents as sources of information by both high and low modernism farmers.

In Prairie as in Ozark, young farmers tended to rate farm information sources somewhat lower than did older farmers, again suggesting a more critical view (See Table 15). The few reversals on factors were not statistically significant. Unlike Ozark, high farm practice adopters in Prairie did not devaluate the mass media sources generally (Table 16). Only farm magazines were given a lower overall evaluation by high than by low level adopters. Unlike in Ozark where high and low adopters tended to rate the county extension agent about the same, high adopters in Prairie rated this source distinctly lower than low adopters did in both general acceptability and component factors; this despite the tradition of quality extension work in the county for many years. On the other hand, dealers both agricultural chemical and feed) were viewed much more positively by high than by low adopters. This may anticipate an increasing inclination of progressive farmers to rely on quality commercial agencies for specialized kinds of farm information. Although innovators were accorded much the same aggregate ratings

TABLE 13

FARM OPERATORS IN OZARK WITH HIGH AND LOW MENTIONS AS A LEGITIMATOR OF FARM PRACTICE DECISIONS CLASSIFIED BY AVERAGE SCALE SCORES ON ITEMS AND FACTORS ASSIGNED DESIGNATED SOURCES OF FARM INFORMATION

VIEWS (FACTORS) Items	Information Sources									
	County Extension Agent		Farm Magazines		Television		Innovator Referents		Legitimator Referents	
	Low (N=161)	High (N=58)	Low (N=165)	High (N=58)	Low (N=160)	High (N=56)	Low (N=114)	High (N=46)	Low (N=113)	High (N=49)
UTILITY	5.99	5.99	5.97	5.69	5.26	4.93	6.15	6.24	6.31	6.17
Bad - good	6.09	6.00	6.02	5.91	5.06	4.63	6.30	6.39	6.56	6.39
Untrustworthy - trustworthy	5.89	6.00	5.62	5.57	5.17	4.93	6.16	6.30	6.46	6.43
Not knowledgeable - knowledgeable	6.03	5.86	5.90	5.78	5.11	4.71	6.22	6.30	6.42	6.08
Out of date - up to date	5.93	6.10	5.55	5.48	5.69	5.46	5.93	5.96	5.78	5.78
(Unscientific - scientific)*	6.10	6.05	5.79	5.67	5.43	5.34	5.90	5.87	5.87	5.39
AFFECTIVITY	5.58	5.80	5.17	5.13	4.99	4.80	5.18	6.14	6.19	6.16
Inconsiderate - considerate	5.72	5.79	5.41	5.24	5.10	4.98	5.95	6.28	6.35	6.35
Cool - warm	5.39	5.67	4.98	4.95	4.92	4.68	5.72	6.00	6.11	5.98
Unapproachable - approachable	5.63	5.93	5.13	5.19	4.96	4.75	5.75	6.13	6.11	6.16
PRACTICALITY	5.83	6.02	5.54	5.42	5.28	5.13	5.92	6.28	6.29	6.30
Undependable - dependable	5.91	6.03	5.65	5.45	5.26	5.16	6.02	6.39	6.37	6.45
Unwise - wise	5.74	6.00	5.42	5.38	5.30	5.09	5.81	6.17	6.20	6.14
ACCESSIBILITY	5.81	5.82	6.07	6.12	5.52	5.15	6.03	5.91	6.23	6.25
Unhandy - handy	5.60	5.52	6.05	6.03	5.36	4.82	5.96	5.78	6.32	6.10
Unavailable - available	6.02	6.12	6.08	6.21	5.68	5.48	6.09	6.04	6.13	6.39
GENERAL ACCEPTABILITY	5.80	5.91	5.64	5.59	5.26	5.00	5.82	6.14	6.26	6.22

*Not included in computing the utility score

TABLE 14

FARM OPERATORS IN OZARK WITH HIGH AND LOW MODERNISM SCORES CLASSIFIED BY AVERAGE SCALE SCORES ON ITEMS AND FACTORS ASSIGNED DESIGNATED SOURCES OF FARM INFORMATION

VIEWS (FACTORS) Items	Information Sources									
	County Extension Agent		Farm Magazines		Television		Innovator Referents		Legitimator Referents	
	Low (N=34)	High (N=44)	Low (N=34)	High (N=44)	Low (N=34)	High (N=44)	Low (N=34)	High (N=44)	Low (N=34)	High (N=44)
UTILITY	4.97	6.31	5.46	5.99	4.36	5.28	5.94	5.17	6.13	6.25
Bad - good	5.03	6.41	5.71	6.25	4.32	4.89	5.88	5.43	6.33	6.41
Untrustworthy - trustworthy	4.94	6.09	5.44	5.77	4.15	5.16	5.96	5.25	6.21	6.27
Not knowledgeable - knowledgeable	4.91	6.32	5.74	6.09	4.24	4.96	5.88	5.16	6.38	6.24
Out of date - up to date	4.91	6.36	4.85	5.91	4.71	5.91	5.88	4.93	5.67	6.09
(Unscientific - scientific)*	5.06	6.36	5.56	5.93	4.38	5.46	6.08	5.09	6.08	5.74
AFFECTIVITY	4.68	6.01	4.76	5.54	4.15	5.28	5.51	5.14	6.06	5.88
Inconsiderate - considerate	4.88	6.07	5.09	5.64	4.29	5.39	5.76	5.23	6.17	5.97
Cool - warm	4.50	5.98	4.29	5.41	4.15	5.32	5.36	5.09	5.96	5.74
Unapproachable - approachable	4.67	5.98	4.91	5.57	4.00	5.84	5.64	5.09	6.04	5.94
PRACTICALITY	5.03	6.21	5.12	5.82	4.37	5.57	5.96	5.17	6.27	6.06
Undependable - dependable	5.12	6.27	5.24	5.80	4.32	5.48	6.08	5.25	6.33	6.24
Unwise - wise	4.94	6.14	5.00	5.84	4.41	5.61	5.84	5.09	6.21	5.88
ACCESSIBILITY	4.80	6.16	5.85	6.47	4.62	5.42	5.72	5.07	6.27	5.87
Unhandy - handy	4.65	5.98	5.85	6.50	4.38	5.25	5.56	4.93	6.29	5.71
Unavailable - available	4.94	6.34	5.85	6.43	4.85	5.59	5.88	5.21	6.25	6.03
OTHER RELATIONAL										
Unwelcome - welcome	--	--	--	--	--	--	--	--	--	--
Distant - close	--	--	--	--	--	--	--	--	--	--
GENERAL ACCEPTABILITY	4.88	6.19	5.29	5.93	4.35	5.35	5.82	5.15	6.16	6.02

*Not included in computing the utility score

TABLE 15

YOUNG AND OLD FARM OPERATORS IN PRAIRIE CLASSIFIED BY AVERACE SCALE SCORES ON ITEMS AND FACTORS ASSIGNED DESIGNATED SOURCES OF FARM INFORMATION

VIEWS (FACTORS) Items	Information Sources: County Extension Agent		Agricultural Chemistry Dealers		Feed Dealers		Farm Magazines		Radio		Television		Innovator Referents		Legitimator Referents	
	Young (N=13)	Old (N=20)	Young (N=18)	Old (N=20)	Young (N=18)	Old (N=19)	Young (N=13)	Old (N=19)	Young (N=13)	Old (N=19)	Young (N=18)	Old (N=21)	Young (N=29)	Old (N=33)	Young (N=29)	Old (N=34)
UTILITY	6.12	6.23	6.19	6.21	5.72	6.20	5.33	5.59	5.31	5.84	4.59	4.99	6.24	6.34	6.47	6.68
Bad - good	6.23	6.15	6.11	6.25	5.72	6.11	5.62	5.47	5.38	5.89	3.56	4.35	6.10	6.28	6.45	6.76
Untrustworthy - trustworthy	6.31	6.30	5.72	6.05	5.50	6.21	5.15	5.68	5.54	5.63	4.61	5.15	6.17	6.50	6.55	6.68
Not knowledgeable - knowledgeable	6.31	6.35	6.22	6.30	5.61	6.11	5.38	5.42	5.69	5.89	4.39	4.80	6.40	6.28	6.38	6.71
Out of date - up to date	5.62	6.10	6.72	6.25	6.06	6.37	5.15	5.79	4.62	5.95	5.78	5.65	6.30	6.31	6.48	6.56
(Unscientific - scientific)*	5.92	6.15	5.72	5.70	5.50	5.63	5.85	5.68	5.23	5.16	4.44	5.10	5.73	5.97	6.00	6.44
AFFECTIVITY	5.66	6.00	5.71	5.70	5.91	6.21	4.87	5.00	5.13	5.04	5.00	4.95	5.58	6.16	6.38	6.47
Inconsiderate - considerate	6.15	6.20	5.78	6.10	6.17	6.42	5.08	5.26	5.31	4.95	4.83	5.05	5.77	6.14	6.52	6.65
Cool - warm	5.38	5.75	5.78	5.50	5.50	6.11	4.77	5.16	5.23	5.00	4.94	4.35	5.70	6.08	6.38	6.32
Unapproachable - approachable	5.46	6.05	5.56	5.50	6.06	6.11	4.77	4.58	4.85	5.16	5.22	5.45	5.27	6.25	6.24	6.44
PRACTICALITY	5.85	6.25	5.83	6.03	5.50	6.03	4.96	5.37	5.12	5.32	5.34	4.98	5.80	6.16	6.42	6.50
Undependable - dependable	5.85	6.45	6.22	6.20	5.78	6.16	4.77	5.47	5.08	5.32	5.39	5.10	5.97	6.25	6.55	6.65
Unwise - wise	5.85	6.05	5.44	5.85	5.22	5.89	5.15	5.26	5.15	5.32	5.28	4.85	5.63	6.06	6.28	6.35
ACCESSIBILITY	6.08	6.00	6.28	6.30	5.87	6.16	5.85	6.29	6.08	6.17	3.94	5.00	5.77	6.49	6.09	6.35
Unhandy - handy	5.92	6.00	6.28	6.25	5.56	6.16	5.69	6.32	6.08	6.21	3.94	5.05	5.77	6.47	6.07	6.32
Unavailable - available	6.23	6.00	6.28	6.35	6.17	6.16	6.00	6.26	6.08	6.11	3.94	4.95	5.77	6.50	6.10	6.38
OTHER RELATIONAL	--	--	--	--	--	--	--	--	--	--	--	--	5.77	6.31	6.25	6.40
Unwelcome - welcome	--	--	--	--	--	--	--	--	--	--	--	--	6.37	6.42	6.66	6.74
Distant - close	--	--	--	--	--	--	--	--	--	--	--	--	5.17	6.19	5.83	6.06
GENERAL ACCEPTABILITY	5.94	6.13	6.01	6.05	5.76	6.16	5.23	5.52	5.36	5.58	4.72	4.98	5.88	6.29	6.35	6.51

*Not included in computing the utility score

TABLE 16

FARM OPERATORS IN PRAIRIE WITH HIGH AND LOW FARM PRACTICE ADOPTION SCORES CLASSIFIED BY AVERAGE SCALE SCORES ON ITEMS AND FACTORS ASSIGNED DESIGNATED SOURCES OF FARM INFORMATION

VIEWS (FACTORS) Items	Information Sources: County Extension Agent		Agricultural Chemistry Dealers		Feed Dealers		Farm Magazines		Radio		Television		Innovator Referents		Legitimator Referents	
	Low (N=16)	High (N=16)	Low (N=15)	High (N=12)	Low (N=15)	High (N=12)	Low (N=16)	High (N=16)	Low (N=16)	High (N=16)	Low (N=15)	High (N=12)	Low (N=24)	High (N=23)	Low (N=23)	High (N=25)
UTILITY	6.35	5.75	5.73	6.25	5.74	5.58	5.61	5.30	5.44	5.44	4.75	4.65	6.09	6.21	6.71	6.55
Bad - good	6.31	5.69	5.80	6.42	5.67	5.58	5.75	5.44	5.44	5.25	3.93	3.92	5.87	5.83	6.78	6.60
Untrustworthy - trustworthy	6.38	6.31	5.33	5.92	5.73	5.25	5.75	5.31	5.38	5.56	4.71	4.42	6.22	6.22	6.78	6.56
Not knowledgeable - knowledgeable	6.25	5.94	5.93	6.17	5.60	5.50	5.63	5.44	5.44	5.69	4.86	4.50	6.17	6.30	6.70	6.52
Out of date - up to date	6.44	5.06	5.87	6.50	6.07	6.00	5.31	5.00	5.50	5.25	5.50	5.75	6.09	6.48	6.57	6.52
(Unscientific - scientific)*	6.00	6.13	5.87	6.00	5.07	5.42	5.69	5.94	5.56	5.00	5.29	4.67	5.83	6.13	5.87	6.32
AFFECTIVITY	5.77	5.50	5.60	6.08	5.71	6.19	4.94	4.90	5.23	5.44	4.19	4.55	5.91	5.88	6.68	6.39
Inconsiderate - considerate	6.19	5.44	5.40	5.92	6.00	6.08	5.00	4.75	5.44	5.38	3.93	4.75	6.00	6.13	6.74	6.32
Cool - warm	5.56	5.44	5.80	6.08	5.73	6.08	4.69	4.81	5.00	5.56	4.07	4.33	5.83	5.74	6.70	6.36
Unapproachable - approachable	5.56	5.63	5.60	6.25	5.40	6.42	5.13	5.13	5.25	5.38	4.57	4.58	5.91	5.78	6.61	6.48
PRACTICALITY	6.32	5.94	5.50	6.04	5.54	5.00	5.13	4.94	5.04	5.28	4.65	5.04	6.02	5.85	6.61	6.46
Undependable - dependable	6.44	6.31	5.73	6.25	5.67	5.25	4.88	4.88	4.88	5.31	4.79	5.08	6.13	5.91	6.74	6.60
Unwise - wise	6.19	5.56	5.27	5.83	5.40	4.75	5.38	5.00	5.19	5.25	4.50	5.00	5.91	5.78	6.48	6.32
ACCESSIBILITY	6.10	5.94	5.73	6.80	5.67	6.46	6.35	6.07	5.91	6.04	4.47	4.21	6.18	6.05	6.52	6.22
Unhandy - handy	5.94	5.63	5.53	6.67	5.73	6.08	6.19	6.25	5.81	6.13	3.86	4.08	6.22	6.09	6.52	6.36
Unavailable - available	6.25	6.25	5.93	6.92	5.60	6.83	6.50	5.88	6.00	5.94	5.07	4.33	6.13	6.00	6.52	6.08
OTHER RELATIONAL	--	--	--	--	--	--	--	--	--	--	--	--	5.96	6.00	6.59	6.18
Unwelcome - welcome	--	--	--	--	--	--	--	--	--	--	--	--	6.13	6.26	6.83	6.56
Distant - close	--	--	--	--	--	--	--	--	--	--	--	--	5.78	5.74	6.30	5.80
GENERAL ACCEPTABILITY	6.14	5.75	5.65	6.27	5.69	5.80	5.47	5.26	5.39	5.52	4.53	4.61	6.03	6.02	6.64	6.39

*Not included in computing the utility score

by high and low level adopters, marked differences occurred on some of the factors. High adopters accorded innovators a much higher utility rating than farmers with low adoption scores. On the other hand, those with low scores tended to assign higher practicality and accessibility ratings. Thus the former upgraded innovators on being knowledgeable, up-to-date, and scientific while the latter were more inclined to see them as wise and dependable.

Unlike high adopters in Ozark, those in Prairie assigned a lower evaluation on influence referents than did the low adopters. The more sophisticated a farmer becomes, the less he may be expected to value the advice of peers in making his decisions and the more he may be expected to apply abstract knowledge from direct sources. This tendency may have developed further in Prairie than in Ozark among the best farmers with a possible attendant downgrading of peers as decisional influence referents.[27]

As in Ozark, high mention innovators in Prairie were positively oriented to change-prone and quality personal referents, innovators, and agricultural chemical dealers as farm information sources (Table 17). Feed dealers, with less professionalized qualities than agricultural chemical dealers, and the mass media sources which are geared to no more than "high average" farmers, were generally rated either equal or less highly on general acceptability by high mention innovators compared to low mention innovators. This tendency was most marked in the critical view of television as a source. The same directional differences tended to occur for radio and feed dealers on the factored components of meaning.

As in the case of the high adopters, high mention innovators also assigned a less positive evaluation to the county extension agent and to their own decisional influence referents than those mentioned only a few times or not at all. This was true for both the overall and dimensional averages. The only exception was a slight reversal on the accessibility dimension for the legitimator referents.

On the other hand, the more professional chemical dealers (in comparison to feed dealers) and innovator referents were rated higher by the high than the low mention innovators. This is in accord with their general inclination to the more direct and expertise sources of farm information. Although high mention innovators did not downgrade the county extension agent as did the high level adopters, high evaluation can be conceivably based upon a different type of use by low and high mention innovators. Thus, instead of obtaining farm information from this source directly, highly change-prone individuals may depend on the county extension agent as a channel to more direct sources of information; i.e., they may depend on him to "find out" for them rather than supply the information directly.

Next consideration is the people who are convincers of others in decisions synonymously referred to as influentials or legitimators). These were compared to persons who received no or few mentions as a most influential "other." Differences in views of information sources held by respondents classified on this basis were not as sharp as those for variations which occurred for respondents classified

TABLE 17

FARM OPERATORS IN PRAIRIE WITH HIGH AND LOW MENTIONS AS AN INNOVATOR
CLASSIFIED BY AVERAGE SCALE SCORES ON ITEMS AND FACTORS ASSIGNED DESIGNATED SOURCES OF FARM INFORMATION

VIEWS (FACTORS)	Information Sources															
	County Extension Agent		Agricultural Chemistry Dealers		Feed Dealers		Farm Magazines		Radio		Television		Innovator Referents		Legitimator Referents	
Items	Low (N=58)	High (N=28)	Low (N=56)	High (N=33)	Low (N=55)	High (N=33)	Low (N=56)	High (N=28)	Low (N=57)	High (N=28)	Low (N=57)	High (N=33)	Low (N=97)	High (N=57)	Low (N=97)	High (N=60)
UTILITY	6.24	6.07	6.05	6.07	6.03	5.90	5.45	5.52	5.60	5.47	4.93	4.95	6.16	6.33	6.52	6.49
Bad - good	6.29	6.14	6.09	6.15	6.05	6.00	5.59	5.54	5.74	5.50	4.05	4.30	6.04	6.28	6.58	6.58
Untrustworthy - trustworthy	6.38	6.25	5.95	5.76	5.89	5.82	5.38	5.04	5.53	5.54	5.05	4.91	6.15	6.51	6.60	6.78
Not knowledgeable - knowledgeable	6.27	6.14	6.11	6.09	6.11	5.85	5.50	5.71	5.68	5.43	5.04	4.85	6.20	6.28	6.49	6.45
Out of date - up to date	6.02	5.75	6.04	6.27	6.07	5.91	5.34	5.79	5.44	5.39	5.57	5.73	6.25	6.23	6.39	6.13
(Unscientific - scientific)*	6.29	6.14	5.93	5.76	5.67	5.76	5.70	5.82	5.35	5.11	5.14	5.21	5.90	5.91	6.08	6.12
AFFECTIVITY	5.88	5.82	5.75	5.85	6.07	6.09	4.99	4.88	5.22	5.26	4.71	4.71	5.89	6.06	6.46	6.27
Inconsiderate - considerate	6.18	5.82	5.89	5.85	6.20	6.18	5.16	5.07	5.37	5.25	4.86	4.73	5.90	6.16	6.55	6.37
Cool - warm	5.66	5.75	5.59	5.82	5.95	5.82	5.00	4.75	5.14	5.25	4.38	4.55	5.92	5.93	6.48	6.08
Unapproachable - approachable	5.80	5.89	5.77	5.88	6.07	6.27	4.82	4.82	5.14	5.29	4.88	4.85	5.86	6.09	6.35	6.35
PRACTICALITY	6.19	5.90	5.77	5.84	5.86	5.78	5.10	5.14	5.29	5.16	5.14	5.08	5.91	6.13	6.49	6.33
Undependable - dependable	6.32	6.11	5.95	5.97	5.95	5.85	5.11	5.07	5.32	5.25	5.30	5.18	6.02	6.28	6.61	6.52
Unwise - wise	6.05	5.68	5.59	5.70	5.76	5.70	5.09	5.21	5.25	5.07	4.98	4.97	5.80	5.98	6.36	6.13
ACCESSIBILITY	6.19	6.15	6.11	6.41	6.14	6.37	6.00	6.02	5.87	5.93	4.74	4.32	6.05	6.18	6.33	6.38
Unhandy - handy	6.07	5.79	6.00	6.42	6.15	6.15	5.89	5.96	5.77	6.00	4.70	4.03	6.03	6.12	6.32	6.40
Unavailable - available	6.30	6.50	6.21	6.39	6.13	6.58	6.11	6.07	5.96	5.86	4.77	4.61	6.06	6.23	6.34	6.35
OTHER RELATIONAL	--	--	--	--	--	--	--	--	--	--	--	--	6.00	6.08	6.36	6.45
Unwelcome - welcome	--	--	--	--	--	--	--	--	--	--	--	--	6.21	6.49	6.66	6.78
Distant - close	--	--	--	--	--	--	--	--	--	--	--	--	5.79	5.67	6.05	6.12
GENERAL ACCEPTABILITY	6.13	5.99	5.92	6.04	6.03	6.04	5.39	5.39	5.50	5.46	4.88	4.77	6.02	6.16	6.45	6.37

*Not included in computing the utility score

on the basis of number of innovator mentions or on farm practice adoption level (See Table 18). Thus for farm magazines, feed dealers, and innovator referents as farm information sources, the overall evaluations between the two groups of legitimators was not significantly different.

On the other hand, radio and television were given higher evaluations by those receiving a large number of mentions as legitimators than those who received few mentions. Agricultural chemical dealers (the most professional of the dealers considered), county extension agents, and influentials (legitimator referents) were accorded higher evaluations by high than by low mention legitimators. Thus farmers highly integrated into the influence structure of the community, somewhat in contrast to high level adopters per se, were positively oriented to the county extension agent as a farm information source; likewise, to other influential farmers.

Lastly, comparing farmers rating high and low on the modernism score, there was a general tendency for those rating high to upgrade all sources except feed dealers and television on general acceptability. On the other hand, television was the only one materially downgraded by high modernism farmers. As in Ozark, county extension agents, comparatively speaking, were the most upgraded of all sources by high modernism farmers. This tended to occur about equally on all factors. Radio and farm magazines were upgraded on utility and affectivity; radio, also on accessibility, but neither on practicality. (See Table 19.)

Television, generally speaking, was most downgraded in the accessibility and practicality sectors. Thus, television was seen as least accessible of all sources by high modernism farmers and by a substantial margin.

Legitimators and innovator referents generally rated high by both groups, were upgraded by the high modernism farmers on all factors. Thus, as in Ozark, high modernism farmers in Prairie were heavily oriented to direct professional sources and communication channels leading to these sources.

4. Use as a Function of Views Held. The question of how use is related to evaluation (views) assigned to sources is posed and examined in this section. Attention is first directed to users and non-users of specific sources and second to the comparative views of sources held by different types of source users. User types were defined on the basis of number and perceived authenticity of the sources used. Use was defined as alleged acquisition of farm information from specifically named sources (25 in number) during the year prior to interview. Because the portions using "other farmers" as sources of information were so high, too few non-users were available for this source for comparative purposes. Comparison of users and non-users of county extension agents, radio, and television as farm information sources was possible. It is significant to note that the most universally used sources within the personal and mass media categories (other farmers and farm magazines) were among the most highly valued within each category.

a. *Of users and non-users.* Views of users and non-users in Table 20 permit comparison of usage and source evaluations for Ozark. Notice that in all cases

TABLE 18

FARM OPERATORS IN PRAIRIE WITH HIGH AND LOW MENTIONS AS A LEGITIMATOR OF FARM PRACTICE DECISIONS CLASSIFIED BY AVERAGE SCALE SCORES ON ITEMS AND FACTORS ASSIGNED DESIGNATED SOURCES OF FARM INFORMATION

VIEWS (FACTORS)	Information Sources															
	County Extension Agent		Agricultural Chemistry Dealers		Feed Dealers		Farm Magazines		Radio		Television		Innovator Referents		Legitimator Referents	
Items	Low (N=58)	High (N=28)	Low (N=68)	High (N=21)	Low (N=67)	High (N=21)	Low (N=56)	High (N=28)	Low (N=57)	High (N=28)	Low (N=69)	High (N=21)	Low (N=109)	High (N=45)	Low (N=110)	High (N=47)
UTILITY	6.05	6.24	6.05	6.06	5.99	5.96	5.39	5.63	5.47	5.73	4.85	5.22	6.17	6.34	6.45	6.63
Bad - good	6.02	6.32	6.13	6.05	6.04	6.00	5.63	5.46	5.65	5.68	3.99	4.67	6.05	6.33	6.52	6.72
Untrustworthy - trustworthy	6.22	6.36	5.91	5.76	5.90	5.76	5.21	5.36	5.42	5.75	4.99	5.05	6.19	6.51	6.56	6.94
Not knowledgeable - knowledgeable	6.00	6.46	6.06	6.24	6.03	5.95	5.48	5.75	5.56	5.68	4.88	5.24	6.19	6.31	6.41	6.62
Out of date - up to date	5.97	5.82	6.10	6.19	5.97	6.14	5.25	5.96	5.23	5.82	5.54	5.90	6.25	6.22	6.32	6.23
(Unscientific - scientific)*	6.12	6.29	5.85	5.90	5.70	5.71	5.61	6.00	5.11	5.61	5.10	5.38	5.89	5.93	6.01	6.30
AFFECTIVITY	5.77	6.00	5.70	6.63	6.09	6.05	4.86	5.14	5.02	5.67	4.71	4.70	5.94	6.00	6.44	6.26
Inconsiderate - considerate	5.98	6.18	5.82	6.05	6.18	6.24	5.09	5.21	5.12	5.75	4.79	4.86	5.93	6.16	6.50	6.43
Cool - warm	5.60	5.79	5.59	5.95	5.88	5.95	4.86	5.04	5.11	5.32	4.40	4.57	5.91	5.96	6.45	6.04
Unapproachable - approachable	5.74	6.07	5.69	6.19	6.21	5.95	4.64	5.18	4.82	5.93	4.93	4.67	5.97	5.87	6.37	6.30
PRACTICALITY	6.10	6.06	5.73	6.00	5.80	5.93	5.07	5.20	5.15	5.43	5.13	5.10	5.98	6.04	6.45	6.38
Undependable - dependable	6.34	6.25	5.90	6.14	5.90	5.95	5.09	5.11	5.18	5.54	5.29	5.14	6.09	6.18	6.58	6.57
Unwise - wise	5.95	5.86	5.56	5.86	5.69	5.90	5.05	5.29	5.12	5.32	4.96	5.05	5.86	5.89	6.31	6.19
ACCESSIBILITY	6.01	6.25	6.17	6.41	6.13	6.53	5.89	6.23	5.78	6.11	4.58	4.57	6.19	5.88	6.22	6.63
Unhandy - handy	5.90	5.89	6.09	6.38	6.07	6.38	5.80	6.14	5.72	6.11	4.54	4.14	6.20	5.73	6.22	6.66
Unavailable - available	6.12	6.61	6.24	6.43	6.18	6.67	5.98	6.32	5.84	6.11	4.62	5.00	6.17	6.02	6.23	6.60
OTHER RELATIONAL	--	--	--	--	--	--	--	--	--	--	--	--	6.06	5.97	6.28	6.66
Unwelcome - welcome	--	--	--	--	--	--	--	--	--	--	--	--	6.30	6.33	6.65	6.85
Distant - close	--	--	--	--	--	--	--	--	--	--	--	--	5.81	5.60	5.91	6.47
GENERAL ACCEPTABILITY	5.98	6.16	5.91	6.11	6.00	6.08	5.30	5.29	5.36	5.74	4.82	4.94	6.07	6.07	6.39	6.48

*Not included in computing the utility score

TABLE 19

FARM OPERATORS IN PRAIRIE WITH HIGH AND LOW MODERNISM SCORES CLASSIFIED BY AVERAGE SCALE SCORES ON ITEMS AND FACTORS ASSIGNED DESIGNATED SOURCES OF FARM INFORMATION

VIEWS (FACTORS) ITEMS	Information Sources: County Extension Agent		Agricultural Chemistry Dealers		Feed Dealers		Farm Magazines		Radio		Television		Innovator Referents		Legitimator Referents	
	Low (N=20)	High (N=18)	Low (N=22)	High (N=16)	Low (N=22)	High (N=16)	Low (N=20)	High (N=18)	Low (N=20)	High (N=18)	Low (N=20)	High (N=16)	Low (N=42)	High (N=34)	Low (N=42)	High (N=34)
UTILITY	5.70	6.43	5.79	5.74	5.67	5.71	5.35	5.60	5.49	5.65	4.60	4.50	5.96	6.24	5.87	6.24
Bad - good	5.70	6.67	6.09	5.69	5.59	5.69	5.50	5.83	5.50	5.50	3.68	4.06	5.95	6.21	5.95	6.21
Untrustworthy - trustworthy	5.95	6.72	5.82	5.50	5.59	5.44	4.95	5.39	5.55	5.50	4.77	4.31	6.07	6.27	6.07	6.27
Not knowledgeable - knowledgeable	5.80	6.39	5.96	5.63	5.68	5.56	5.40	5.78	5.50	5.72	4.77	4.38	5.98	6.24	5.98	6.24
Out of date - up to date	5.35	5.94	6.00	6.13	5.82	6.13	5.55	5.39	5.40	5.89	5.18	5.25	5.83	6.24	5.85	6.24
(Unscientific - scientific)*	6.00	6.50	5.50	5.69	5.59	5.75	5.80	5.72	5.05	5.17	5.09	4.56	5.52	6.03	5.53	6.05
AFFECTIVITY	5.45	6.30	5.82	5.67	5.95	6.15	4.68	5.13	5.13	5.69	4.44	4.44	5.72	5.89	5.72	5.92
Inconsiderate - considerate	5.65	6.39	5.68	5.50	6.00	6.25	5.15	4.78	5.45	5.50	4.50	4.63	5.83	6.03	5.83	6.04
Cool - warm	5.10	6.33	5.73	5.63	5.77	5.94	4.55	5.22	5.15	5.67	4.32	4.25	5.52	5.77	5.51	5.78
Unapproachable - approachable	5.60	6.17	6.05	5.88	6.09	6.25	4.35	5.39	4.80	5.89	4.50	4.44	5.81	5.88	5.81	5.93
PRACTICALITY	5.73	6.56	5.68	5.63	5.68	5.51	5.08	5.06	5.53	5.45	4.91	4.63	5.74	6.06	5.74	6.06
Undependable - dependable	5.90	6.67	5.77	5.75	5.68	5.63	4.95	5.17	5.65	5.61	5.09	4.75	5.83	6.15	5.84	6.14
Unwise - wise	5.55	6.44	5.59	5.50	5.68	5.38	5.20	4.94	5.40	5.28	4.73	4.50	5.64	5.97	5.64	5.97
ACCESSIBILITY	5.75	6.56	6.14	6.44	6.03	6.47	6.02	6.03	5.90	6.22	4.39	4.00	5.89	6.15	5.87	6.14
Unhandy - handy	5.55	6.39	6.14	6.38	5.91	6.19	6.10	6.11	5.85	6.33	4.46	3.69	5.86	6.03	5.84	6.02
Unavailable - available	5.95	6.72	6.14	6.50	6.14	6.75	5.95	5.78	5.95	6.11	4.32	4.31	5.91	6.27	5.90	6.26
OTHER RELATIONAL	--	--	--	--	--	--	--	--	--	--	--	--	5.56	6.03	5.56	6.03
Unwelcome - welcome	--	--	--	--	--	--	--	--	--	--	--	--	5.95	6.27	5.95	6.27
Distant - close	--	--	--	--	--	--	--	--	--	--	--	--	5.17	5.79	5.16	5.78
GENERAL ACCEPTABILITY	5.68	6.44	5.87	5.81	5.80	5.91	5.29	5.46	5.44	5.68	4.62	4.43	5.78	6.08	5.78	6.09

*Not included in computing the utility score

TABLE 20

AVERAGE EVALUATIVE SCALE SCORES ASSIGNED INFORMATION SOURCES BY FARMERS IN OZARK USING AND NOT USING THE SOURCES

Views (Factors) Items	Information Sources					
	County Extension Agent		Farm Magazines		Television	
	Using (Score) (N=133)	Not Using (Score) (N=94)	Using (Score) (N=218)	Not Using (Score) (N=9)	Using (Score) (N=81)	Not Using (Score) (N=146)
UTILITY	6.20	5.37	5.65	5.86	5.66	4.51
Bad - good	6.29	5.42	5.89	6.00	5.65	4.18
Untrustworthy - trustworthy	6.19	5.23	5.50	5.67	5.53	4.49
Not knowledgeable - knowledgeable	6.22	5.33	5.78	6.11	5.48	4.36
Out of date - up to date	6.08	5.51	5.43	5.67	5.99	5.01
(Unscientific - scientific)*	6.20	5.60	5.64	6.11	5.89	4.73
AFFECTIVITY	5.79	5.12	5.04	5.82	4.92	4.58
Inconsiderate - considerate	5.89	5.22	5.22	6.33	5.14	4.65
Cool - warm	5.56	5.04	4.86	5.56	4.80	4.52
Unapproachable - approachable	5.93	5.10	5.03	5.56	4.83	4.58
PRACTICALITY	6.06	5.30	5.37	6.33	5.55	4.68
Undependable - dependable	6.14	5.34	5.46	6.44	5.53	4.68
Unwise - wise	5.98	5.25	5.28	6.22	5.57	4.67
ACCESSIBILITY	5.91	5.38	5.96	6.34	5.72	4.85
Unhandy - handy	5.65	5.18	5.91	6.67	5.58	4.62
Unavailable - available	6.16	5.58	6.01	6.00	5.85	5.08
GENERAL ACCEPTABILITY	5.99	5.29	5.51	6.09	5.46	4.66

*Not included in computing the utility score

except for farm magazines in Ozark, users evaluated sources significantly higher than non-user respondents. (This exception can be attributed to the very small number of non-users and likely chance variation.) This tendency for users to upgrade their views of sources in comparison to non-users was true not only for the general acceptability score and dimension average but also for each scale average. The same general pattern was revealed in Prairie (See Table 21).

Regarding community differences, it can be seen that users of mass media in Ozark tended to evaluate those sources higher (many of the differences being significant) than the users of these media in Prairie. On the other hand, users of the county extension agent in Ozark tended to rate them lower on every scale than users in Prairie; many of these differences were significant. These differences were in accord with the general orientation of farmers in Prairie but not to the more direct sources of farm information and the somewhat greater favorability of farmers in Ozark to farm magazines and television, the only two mass media sources for which direct comparison was possible.

b. *Of types of users.* The second general question was: Do different types of source users view various sources differently? This, of course, raises a number of prior questions: (1) Why types at all? (2) What types? and (3) Who belongs to what types? Typologies are important in the extension education context because people to whom change efforts are directed may have different source use and response patterns; e.g., some may refrain from reading newspapers or watching television at all or at least refrain for purposes of getting farm information. Some may characteristically seek out and use the most direct, authentic sources, while others may be essentially peer oriented. Many classifications of users are possible, ranging from simple user-nonuser categories, as was done in a Missouri study,[28] to those based on the way persons internalize the messages received.[29] Other classification criteria might include volume of use, diversity of sources used, expertise of the sources used or directness-remoteness of the sources to the origin of the information communicated.

A combination of three criteria was used in this study: (1) number of sources used, (2) variety of sources used, and (3) the expertise (directness of source to information originated) used. The first two criteria provided the primary and the last a secondary basis for classifying users. Generally speaking, the expertise dimension, open to possible disagreement, closely approximates a less debatable "directness of access to the originating source." This assumes that a major portion of the information that is communicated originated in agricultural experiment stations or industry. The experimenting scientist would then represent the most direct source considered and likely also the most competent. On the other hand, other farmers would almost certainly represent the most indirect and surely the most variant in quality. Farm talk is a folkway of farm people, no matter what they know. County extension agents, mass media, and dealers would seem to generally occupy intermediate positions.

TABLE 21

FARM OPERATORS IN PRAIRIE WHO USE OR DON'T USE SELECTED INFORMATION SOURCES
CLASSIFIED BY AVERAGE SCALE SCORES ON ITEMS AND FACTORS ASSIGNED TO THE DESIGNATED SOURCES OF FARM INFORMATION

VIEWS (FACTORS) Items	Information Sources: County Extension Agent		Dealers		Farm Magazines		Radio		Television	
	Use	Don't Use	Use	Don't Use	Use	Don't Use	Use	Don't Use	Use	Don't Use
	(N=50)	(N=36)	(N=73)	(N=13)	(N=78)	(N= 6)	(N=64)	(N=21)	(N=23)	(N=67)
UTILITY	6.27	5.90	6.20	5.73	5.53	4.67	5.73	5.02	5.38	4.71
Bad - good	6.36	5.78	6.23	5.69	5.68	4.17	5.91	4.90	4.43	3.99
Untrustworthy - trustworthy	6.50	5.94	6.37	5.69	5.33	4.33	5.72	4.95	5.52	4.75
Not knowledgeable - knowledgeable	6.38	5.83	6.25	5.46	5.65	4.50	5.80	5.00	5.61	4.67
Out of date - up to date	5.82	6.06	5.96	6.08	5.47	5.67	5.48	5.24	5.96	5.43
(Unscientific - scientific)*	6.44	5.81	6.25	5.15	5.81	4.83	5.34	5.05	5.43	5.00
AFFECTIVITY	5.99	5.66	5.90	5.82	4.97	4.78	5.38	4.79	4.82	4.59
Inconsiderate - considerate	6.18	5.86	6.10	6.31	5.13	5.17	5.47	4.90	5.04	4.66
Cool - warm	5.82	5.44	5.73	5.69	5.00	3.83	5.30	4.81	4.52	4.34
Unapproachable - approachable	5.98	5.67	5.86	5.46	4.78	5.33	5.36	4.67	4.91	4.78
PRACTICALITY	6.28	5.81	6.13	5.58	5.14	4.75	5.37	4.86	5.52	4.90
Undependable - dependable	6.48	5.92	6.30	5.69	5.14	4.50	5.42	4.90	5.74	5.01
Unwise - wise	6.08	5.69	5.96	5.46	5.14	5.00	5.31	4.81	5.30	4.79
ACCESSIBILITY	6.31	5.78	6.27	5.81	6.07	5.25	6.09	5.29	4.87	4.41
Unhandy - handy	6.12	5.58	6.05	5.85	6.00	4.83	6.02	5.33	5.04	4.18
Unavailable - available	6.50	5.97	6.49	5.77	6.13	5.67	6.16	5.24	4.70	4.64
GENERAL ACCEPTABILITY	6.21	5.79	6.13	5.74	5.43	4.86	5.64	4.99	5.15	4.65

*Not included in computing the utility score

c. *Use patterns and views in Ozark.* In Ozark three patterns of use were delineated. *Type I* was characterized mostly by low usage in both number and variety of sources. Type I individuals used either no farm information source or used only mass media and other farmers, out of about 25 possible sources about which they were questioned. (See figure 2)

Type II was characterized by the use of several information sources (usually two or three) in addition to mass media and other farmers. These additional sources included college bulletins and county extension agents, both rating higher on the directness-expertise dimension than either farmers or the mass media generally.[30] In short, this general pattern evidenced low volume of source use but some selectivity in terms of the expertise-directness dimension.

Type III was generally characterized by both volume and selectivity of choice.[31] Farmers in this group tended to be near "all channel" users in addition to using the more direct, high expertise sources. The major difference from the other two types was the greater number and better quality of the sources used.

With all the farmers in Ozark classified into these three use types (46 in Type I, 82 in Type II, and 99 in Type III) it was possible to see how each viewed the five information sources they were asked to scale. Table 22 contains the average evaluations of these sources on each scale and dimension considered.

As the reader can see from Table 22 the average evaluation of innovator and legitimator referents and county extension agents increased progressively from types I through III. This was also true for factor averages except for the accessibility rating assigned to the county agent as a source. In this case, the difference was between Type I users who rated the county extension agents relatively low and the other two types that tended to rate them considerably higher. In all other aspects, Type II respondents rated this source lower than Type III which could be a factor in their lower use made of the source. Thus, even though the second type of user perceived them as accessible as the third type, they felt they were not as utilitarian, practical, or beneficial and therefore may be less inclined to seek them as a source of information or advice.

Type II users were characterized by a clear and consistent tendency to rate mass media (television and farm magazines) higher than the other types on all factors and views. This indeed suggests a strong orientation to the mass media.

d. *Use patterns and views in Prairie.* In Prairie, four use types were delineated. Just as in Ozark, *Type I* was characterized by little or no use of the 25 farm information sources enumerated, other than mass media and other farmers.

Type II was characterized by use of three or four sources but generally confined to dealers, mass media, family members, and various governmental agencies other than the Cooperative Extension Service.

Type III was characterized by farmers who used six or seven information sources with a heavy orientation to the county extension agent and to commercial sources, particularly the last. This type did not emerge as a distinct one in Ozark: it was perhaps most characterized by its orientation to commercial sources,

IN OZARK

Type I	Type II	Type III
Low usage in both number and variety.	Higher variety and number of sources used than Type I.	High volume and high usage of "direct sources."
Use mainly other farmers and mass media.	Use several sources in addition to other farmers and the mass media.	All channel users.
	Some use of college bulletins and county extension agents.	Inclined to direct extension sources; mainly local.

IN PRAIRIE

Type I	Type II	Type III	Type IV
Low usage confined mainly to other farmers and mass media.	Low volume but more variety than Type I.	Moderately high volume and variety.	High volume and variety.
	Use several sources including dealers, mass media, and government agencies (other than extension).	Use many sources with heavy orientation to commercial and direct extension particularly the former.	All channel users.
			Strong inclination to direct extension including university faculty.

Figure 2. Descriptive Profile of Information Source User Types in Ozark and Prairie.

TABLE 22
AVERAGE EVALUATIVE SCORES ASSIGNED TO FARM INFORMATION SOURCES BY FARMERS IN OZARK CLASSIFIED BY SOURCE USE TYPES

Views (Factors) Items	Information Sources: Farm Magazines			Television			County Extension Agent			Innovator Referents			Legitimator Referents		
	Source Use Types			Source Use Types			Source Use Types			Source Use Types			Source Use Types		
	I (N=46)	II (N=82)	III (N=99)	I (N=46)	III (N=82)	III (N=99)	I (N=46)	II (N=82)	III (N=99)	I (N=46)	II (N=82)	III (N=99)	I (N=46)	II (N=82)	III (N=99)
UTILITY	5.40	5.84	5.69	4.48	5.37	4.80	5.42	5.70	6.06	3.95	4.77	5.14	3.87	5.07	5.21
Bad - good	5.63	5.95	6.01	4.13	5.27	4.53	5.54	5.72	6.15	4.07	4.84	5.26	4.07	5.26	5.39
Untrustworthy - trustworthy	5.28	5.74	5.48	4.52	5.20	4.78	5.22	5.68	6.02	3.93	4.73	5.23	3.98	5.28	5.32
Not knowledgeable - knowledgeable	5.50	5.85	5.92	4.26	5.30	4.60	5.43	5.70	6.04	4.07	4.77	5.18	3.89	5.04	5.29
Out of date - up to date	5.20	5.75	5.33	5.00	5.72	5.27	5.48	5.69	6.01	3.74	4.72	4.87	3.52	4.70	4.83
(Unscientific - scientific)*	5.15	5.98	5.70	4.52	5.64	5.06	5.50	5.81	6.15	3.76	4.58	4.92	3.46	4.69	4.76
AFFECTIVITY	4.96	5.20	5.07	4.49	4.94	4.66	5.23	5.37	5.65	3.69	4.52	5.02	3.72	5.02	5.20
Inconsiderate - considerate	5.22	5.36	5.29	4.48	5.19	4.73	5.24	5.60	5.67	3.78	4.64	5.10	3.87	5.15	5.32
Cool - warm	4.74	5.14	4.82	4.57	4.73	4.60	5.20	5.14	5.49	3.63	4.41	5.01	3.74	4.86	5.14
Unapproachable - approachable	4.93	5.10	5.11	4.41	4.89	4.64	5.24	5.38	5.80	3.67	4.51	4.96	3.54	5.04	5.15
PRACTICALITY	5.20	5.64	5.40	4.56	5.24	5.03	5.37	5.62	5.91	3.86	4.67	5.03	3.96	5.10	5.19
Undependable - dependable	5.35	5.78	5.42	4.50	5.27	5.02	5.43	5.67	5.99	3.93	4.77	5.11	3.98	5.21	5.27
Unwise - wise	5.04	5.49	5.37	4.61	5.20	5.04	5.30	5.57	5.83	3.78	4.56	4.94	3.93	4.98	5.11
ACCESSIBILITY	5.70	6.13	6.04	5.18	5.36	5.04	5.10	5.79	5.76	3.83	4.79	4.90	3.82	5.11	5.16
Unhandy - handy	5.63	6.09	6.02	5.00	5.19	4.81	4.93	5.60	5.46	3.89	4.74	4.76	3.93	5.06	5.15
Unavailable - available	5.76	6.17	6.05	5.35	5.53	5.27	5.26	5.98	6.05	3.76	4.83	5.04	3.70	5.16	5.16
GENERAL ACCEPTABILITY	5.32	5.70	5.55	4.68	5.23	4.88	5.28	5.62	5.85	3.83	4.69	5.02	3.84	5.08	5.19

*Not included in computing the utility score

an expected condition in a highly commercialized agricultural area.

Type IV, just as Type III in Ozark, was characterized by high selectivity on the expertise-distance dimension and by the variety of quality information sources used. These included college bulletins, county agents, and direct use of the University faculty in addition to the other farm information sources used by the other three types.

Fifteen respondents or approximately 9 percent of the farmers were classified as Type 1; 53 or 30 percent as Type II; 52 or 29% as Type III; and 53 or 30% into the fourth type. Sufficient information was not available to classify two of the farmers interviewed.

Due to complications resulting from differences in farmers who were asked to rate the eight sources (one group evaluated county agents, farm magazines, and radio and another group, agricultural chemical dealers, feed dealers, and television, both groups evaluated innovator and legitimator referents) no attempt was made to assess significant differences in the ratings assigned; instead only directions of evaluational differences are reported.

Tables 23 to 26 contain the basic data. Comparison of ratings that different types of users assigned to sources reveals a strong tendency to upgrade county extension agents, innovators, and legitimators on all evaluative components from Type I through IV. Although, generally speaking, mass media were not among the highest rated sources by any user type, there was a sharp upgrading from Type I through IV on the affectivity dimension. Perhaps this is because of content more aligned with the interests of the Type III and IV farmers than with an increased feeling of warmth or closeness to the mass media sources as such. This same trend was also evident for accessibility except Type IV users strongly downgraded television on this count.

Along with this progressive rating assigned to some sources, there was an accompanying tendency to downgrade dealers as sources, particularly on the practicality view across types. Type IV farmers also downgraded them on utility. Other differences among types tended to be more peculiar to the particular user type.

Thus, when compared to other types, Type I users were highly favorable to the utility of dealers as sources of farm information; quite to the exclusion of the more direct information sources, particularly the county extension agent. Although they were slightly favorable toward the practicality dimension also, they did not see dealers as quite so distinctly superior in this regard.

In terms of within own group variation in views held of sources, Type I users strangely saw feed and agricultural chemical dealers as having highest utility of all sources. Item scales defining the utility view followed much the same pattern as the composite score except farm magazines were strangely regarded as being most scientific, followed by television, agricultural chemical dealers, and the county extension agent, all rated about equally. Even though they rated no source as being very practical, agricultural chemical dealers were rated highest in this re-

TABLE 23
AVERAGE EVALUATIVE SCORES ASSIGNED TO FARM INFORMATION SOURCES
BY SOURCE USE TYPE I FARMERS IN PRAIRIE

Views (Factors) Items	Information Sources: County Extension Agent (Score) (N=9)	Agricultural Chemical Dealers (Score) (N=6)	Feed Dealers (Score) (N=6)	Farm Magazines (Score) (N=9)	Radio (Score) (N=9)	Television (Score) (N=6)	Innovator Referents (Score) (N=15)	Legitimator Referents (Score) (N=15)
UTILITY	5.34	6.33	6.13	5.00	5.28	4.59	5.23	5.03
Bad - good	4.78	6.50	6.17	4.67	5.00	3.67	5.07	5.00
Untrustowrthy - trustworthy	5.56	6.00	6.00	4.89	5.33	5.00	5.33	5.00
Not knowledgeable - knowledgeable	5.33	6.33	6.17	5.44	5.33	4.00	5.20	5.00
Out of date - up to date	5.67	6.50	6.17	5.00	5.44	5.67	5.33	5.13
(Unscientific - scientific)*	5.78	5.83	5.17	6.11	5.44	5.83	5.13	4.87
AFFECTIVITY	5.11	5.78	6.28	4.18	4.92	4.06	5.18	4.69
Inconsiderate - considerate	5.00	5.83	6.33	4.33	5.00	4.00	5.07	4.67
Cool - warm	4.78	6.00	6.00	3.89	4.33	3.50	5.13	4.53
Unapproachable - approachable	5.56	5.50	6.50	4.33	5.44	4.67	5.33	4.87
PRACTICALITY	5.11	5.92	5.84	4.56	4.84	4.84	5.07	4.97
Undependable - dependable	5.22	6.17	6.00	3.67	4.67	5.00	5.13	5.00
Unwise - wise	5.00	5.67	5.67	5.44	5.00	4.67	5.00	4.93
ACCESSIBILITY	5.06	6.58	5.75	5.89	5.28	4.84	5.46	4.77
Unhandy - handy	4.78	6.33	5.67	5.44	5.22	4.67	5.53	4.93
Unavialable - available	5.33	6.83	5.83	6.33	5.33	5.00	5.40	4.60
OTHER RELATIONAL								
Unwelcome - welcome	--	--	--	--	--	--	5.33	4.87
Distant - close	--	--	--	--	--	--	5.13	4.60

*Not included in computing the utility score

TABLE 24
AVERAGE EVALUATIVE SCORES ASSIGNED TO FARM INFORMATION SOURCES
BY SOURCE USE TYPE II FARMERS IN PRAIRIE

Views (Factors) Items	Information Sources							
	County Extension Agent (Score) (N=23)	Agricultural Chemical Dealers (Score) (N=31)	Feed Dealers (Score) (N=30)	Farm Magazines (Score) (N=22)	Radio (Score) (N=23)	Television (Score) (N=32)	Innovator Referents (Score) (N=53)	Legitimator Referents (Score) (N=53)
UTILITY	6.33	6.07	6.16	5.60	5.56	4.92	5.85	6.32
Bad - good	6.43	6.13	6.20	5.82	5.78	4.13	5.79	6.30
Untrustworthy - trustworthy	6.43	6.03	6.10	5.45	5.52	5.09	5.94	6.45
Not knowledgeable - knowledgeable	6.30	6.16	6.17	5.64	5.65	5.13	5.87	6.34
Out of date - up to date	6.17	5.97	6.17	5.50	5.30	5.34	5.79	6.19
(Unscientific - scientific)*	5.96	5.94	5.97	5.36	5.35	5.00	5.62	5.85
AFFECTIVITY	5.78	6.00	6.06	5.05	5.12	4.54	5.56	6.30
Inconsiderate - considerate	6.22	6.23	6.30	5.09	5.13	4.75	5.60	6.40
Cool - warm	5.48	5.90	6.00	5.00	5.13	4.31	5.47	6.23
Unapproachable - approachable	5.65	5.87	5.87	5.05	5.09	4.56	5.60	6.26
PRACTICALITY	6.17	6.03	6.12	5.30	5.05	4.93	5.68	6.21
Undependable - dependable	6.30	6.19	6.27	5.36	5.09	5.13	5.81	6.34
Unwise - wise	6.04	5.87	5.97	5.23	5.00	4.72	5.55	6.08
ACCESSIBILITY	6.04	6.10	6.25	6.12	6.00	4.86	5.83	6.18
Unhandy - handy	5.78	6.03	6.23	6.00	5.91	4.59	5.75	6.13
Unavailable - available	6.30	6.16	6.27	6.23	6.09	5.13	5.91	6.23
OTHER RELATIONAL								
Unwelcome - welcome	--	--	--	--	--	--	5.81	6.28
Distant - close	--	--	--	--	--	--	5.19	5.81

*Not included in computing the utility score

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TABLE 25
AVERAGE EVALUATIVE SCORES ASSIGNED TO FARM INFORMATION SOURCES
BY SOURCE USE TYPE III FARMERS IN PRAIRIE

	Information Sources							
	County Extension Agent (Score) (N=27)	Agricultural Chemical Dealers (Score) (N=24)	Feed Dealers (Score) (N=24)	Farm Magazines (Score) (N=27)	Radio (Score) (N=27)	Television (Score) (N=24)	Innovator Referents (Score) (N=52)	Legitimator Referents (Score) (N=52)
UTILITY	6.13	6.20	5.94	5.63	5.62	5.33	6.06	6.48
Bad - good	6.04	6.29	5.96	5.81	5.67	4.83	6.02	6.61
Untrustworthy - trustworthy	6.41	5.88	5.71	5.37	5.74	5.08	6.04	6.69
Not knowledgeable - knowledgeable	6.26	6.29	5.92	5.81	5.67	5.54	6.15	6.43
Out of date - up to date	5.81	6.33	6.17	5.52	5.41	5.88	6.04	6.20
(Unscientific - scientific)*	6.52	6.42	5.75	6.07	5.33	5.42	5.85	6.08
AFFECTIVITY	5.95	5.83	6.10	5.00	5.52	4.78	5.74	6.24
Inconsiderate - considerate	6.11	5.96	5.88	5.11	5.63	4.92	5.73	6.33
Cool - warm	5.89	5.50	5.92	4.93	5.56	4.46	5.87	6.20
Unapproachable - approachable	5.85	6.04	6.50	4.96	5.37	4.96	5.63	6.18
PRACTICALITY	6.06	5.73	5.65	5.21	5.52	5.40	5.80	6.37
Undependable - dependable	6.22	5.88	5.71	5.22	5.56	5.33	5.87	6.49
Unwise - wise	5.89	5.58	5.58	5.19	5.48	5.46	5.73	6.24
ACCESSIBILITY	6.28	6.40	6.42	6.09	6.13	4.42	5.83	6.29
Unhandy - handy	6.04	6.42	6.50	6.22	6.30	4.46	5.75	6.33
Unavailable - available	6.52	6.38	6.33	5.96	5.96	4.38	5.90	6.25
OTHER RELATIONAL								
Unwelcome - welcome	--	--	--	--	--	--	6.15	6.73
Distant - close	--	--	--	--	--	--	5.69	6.14

*Not included in computing the utility score

TABLE 26
AVERAGE EVALUATIVE SCORES ASSIGNED TO FARM INFORMATION SOURCES
BY SOURCE USE TYPE IV FARMERS IN PRAIRIE

Views (Factors) Items	Information Sources: Agricultural County Extension Agent (Score) (N=25)	Agricultural Chemical Dealers (Score) (N=28)	Agricultural Feed Dealers (Score) (N=28)	Farm Magazines (Score) (N=25)	Radio (Score) (N=25)	Television (Score) (N=28)	Innovator Referents (Score) (N=53)	Legitimator Referents (Score) (N=53)
UTILITY	6.32	5.85	5.79	5.46	5.63	4.51	6.30	6.49
Bad - good	6.60	5.86	5.89	5.56	5.84	3.54	6.19	6.64
Untrustworthy - trustworthy	6.44	5.68	5.71	5.24	5.44	4.64	6.43	6.70
Not knowledgeable - knowledgeable	6.40	5.82	5.89	5.44	5.64	4.32	6.23	6.43
Our of date - up to date	5.84	6.04	5.68	5.60	5.60	5.54	6.34	6.19
(Unscientific - scientific)*	6.40	5.32	5.50	5.72	5.12	4.82	5.74	6.09
AFFECTIVITY	6.04	5.51	6.05	5.07	5.19	4.80	6.06	6.44
Inconsiderate - considerate	6.16	5.43	6.32	5.44	6.36	4.79	6.17	6.53
Cool - warm	5.88	5.50	5.75	5.16	5.16	4.61	5.92	6.40
Unapproachable - approachable	6.08	5.61	6.07	4.60	5.04	5.00	6.09	6.40
PRACTICALITY	6.36	5.55	5.66	5.02	5.32	4.98	6.07	6.43
Undependable - dependable	6.56	5.71	5.68	5.20	5.48	5.21	6.21	6.57
Unwise - wise	6.16	5.39	5.64	4.84	5.16	4.75	5.92	6.28
ACCESSIBILITY	6.54	6.13	6.13	6.02	5.82	4.18	6.10	6.36
Unhandy - handy	6.48	6.04	5.86	5.84	5.60	4.07	6.11	6.32
Unavailable - available	6.60	6.21	6.39	6.20	6.04	4.29	6.08	6.40
OTHER RELATIONAL								
Unwelcome - welcome	--	--	--	--	--	--	6.40	6.80
Distant - close	--	--	--	--	--	--	5.74	5.96

*Not included in computing the utility score

gard and influentials least. Feed dealers in particular, and to a lesser degree agricultural chemical dealers, were rated as distinctly high on affectivity. The former were rated distinctly highest on accessibility. Thus, the Type I group appeared to carry an especially favorable view of dealers, particularly in regard to utility. They diverged from expected standards of what would seem to constitute a scientific source by rating farm magazines as the most scientific source.

Type II farmers were very much like those in Type I in utility views held of dealers but greatly upgraded the county extension agent and influentials. All three were considered to be up to date, knowledgeable, and trustworthy. No source was viewed as outstandingly more scientific than any other, although television was distinctly lowest. The same four sources (enumerated above) were rated by this type as about equally high on practicality and accessibility with farm magazines also rated as highly accessible. Perhaps, the most distinctive characteristic of this group was their inclination to admit a wide variety of personal sources into their estimation of high esteem.

If Type III farmers had any distinctive within-group characteristics in views held of farm information sources it was in their relatively high regard for influentials on the utility and practicality dimensions, even though agricultural chemical dealers were seen as more scientific and up to date; also, they tended to be distinctive for the high accessibility they assigned both types of dealers and the high affectivity rating they accorded feed dealers. Even so, it can hardly be said that this distinguished them from any but Type I. Their within-group differences of views regarding sources was perhaps their most distinguishing characteristic. This suggests a tendency to choosiness among sources but low unanimity of views held.

Type IV most emphasized the utility of quality sources in terms of the directness-expertise characteristic. People in this group were most discriminating in evaluations assigned to sources. In terms of specifics, they tended to perceive the county extension agent, the two referent types (innovator and influential), and agricultural chemical dealers as having higher utility and practicality and being more accessible and more beneficial (affectivity). The one exception was for Type IV respondents to downgrade radio on the affective, practical, and accessible dimensions.

In terms of within-group views, like among group views, this group tended to place a high utility on the legitimator and innovator referents and the county extension agent. The extension agent was rated as most scientific of all information sources but innovators were rated as being most up-to-date. Both the county agent and influence referents were regarded as highly knowledgeable and trustworthy with innovators being a close second. Agricultural chemical dealers who were regarded highly on being up-to-date, were downgraded some on the knowledgeability and trustworthiness scales. Television, which rated lowest of all of the sources, was distinctly lowest on the trustworthiness scale.

Type IV individuals saw referents and county agents as being most practical, with innovators also high in this regard. A high dependability view was the scale most contributory to the practicality dimension. The affectivity view followed the same pattern but with feed dealers rating high also and chemical dealers not rating high. County agents and influence referents were regarded as most accessible and television as least.

SUMMARY, INTERPRETATIONS AND CONCLUSIONS

This study was concerned with how farmers view farm information sources, how their views vary with use of the sources, and the characteristics of farmers who use different sources.

About Conceptualized Views

Phase 1 of the study, based on a diversity of information sources and farmers' views of them, was concerned with determining basic ways of viewing sources and methods of measuring them. Use of the semantic differential and factor analysis disclosed utility, practicality, affectivity, and accessibility views. Utility, the predominant view, was described by good-bad, trust-worthy-untrustworthy, knowledgeable-not knowledgeable, up-to-date or out-of-date scales. A source rating high in utility would then be regarded as good, trustworthy, knowledgeable, up-to-date, and to a lesser degree scientific also. A scientific-unscientific item was included because of its special significance to farm information development and disseminating systems in a highly developed agriculture.

Practicality was defined by the undependable-dependable, wise-unwise scales; *affectivity* by inconsiderate-considerate, cool-warm, approachable-unapproachable; and *accessibility* by the handy-unhandy and available-unavailable scales. A *general acceptability* rating was assigned on the basis of the composite ratings on all of the scales.

In Phase 2 of the study, the eleven scales so selected were variously applied to radio, television, county extension agents, farm magazines, agricultural chemical dealers, feed dealers, innovator, and legitimator referents by farmers in two Missouri communities. One was located in affluent northwest Missouri, referred to as Prairie and one in the economically disadvantaged farming areas of the Ozarks in south Missouri.

About Views of Sources

Farmers in Ozark distinguished between each of the sources considered as being significantly different in terms of the aggregate measures of views held. This indicated that they regarded each of the sources as having different qualities. In terms of the general acceptability rating, television was rated lowest in both communities. In Ozark the hierarchy from high to low was legitimator referents (persons named as most influential in own farm practice adoption decisions), innovators (persons named as usually first to try new farm practices in the local-

ity), county extension agents, farm magazines, and finally television. Differences between each of these sources were significant at the .05 confidence level. Except for slight deviations in the accessibility dimension, the sources were ordered much the same on the factored components of meaning. County agents and television were seen as least accessible while legitimator referents were regarded as most accessible.

In Prairie, distinctions tended to be more among classes of sources than among specific ones with the ratings from high to low being (1) legitimators, followed by (2) feed dealers, agricultural chemical dealers, innovators, and the county extension agent as a group; then (3) radio and farm magazines as a group; and (4) television last in the hierarchy. In addition to meaningful categories of groups the range of evaluations on the factors was much greater in Prairie than in Ozark. It is significant that dealers (an emerging source of quality farm information), county extension agents, and innovator referents were rated together as information sources, yet not as high as one's own decisional referents (legitimators). In this complex of differences, there were also sizable distinctions between personal sources as a group and the mass media. The mass media were rated lower in Prairie than in Ozark. The greatest difference was for television in the two communities.

In terms of dimensions of meaning, sources tended to be rated about equally high or low on practicality and affectivity views on the one hand, and accessibility and utility on the other in Prairie, with the first two being rated higher than the last two. In terms of magnitude of ratings on components in Ozark, accessibility ranked highest, utility and practicality second, and affectivity lowest. The difference between the utility and practicality views was not statistically significant although the former was somewhat the higher. Much the same rank order and magnitude of factored views then occurred in both communities when farm information sources were viewed in the aggregate.

However, the rank order importance assigned various factors tended to vary by farm information sources; i.e., some factors appeared to be more important than others in rating each of the sources. In Prairie practicality was highest for television and accessibility lowest. The relatively high rating on practicality is difficult to explain but the low rating on accessibility perhaps can be explained in terms of the availability of quality farm informational programs at a time when farmers could view them.

Feed and agricultural chemical dealers were rated highest on accessibility and lowest on practicality. The high accessibility rating is quite understandable in terms of the active sales effort of dealers in the area. Legitimator and innovator referents were rated highest on the utility and the former lowest on accessibility. The latter was rated lowest on affectivity.

Predominant factors for rating information sources in Ozark differed in many respects (within the context of relatively small differences assigned to various information sources on each of the factors). Thus in contrast to Prairie, television and farm magazines were accorded the highest factor ratings on the accessibility

dimension and the lowest on affectivity. It seems very likely that the work in the locally prevalent dairy enterprises would leave Ozark farmers relatively free to view farm information programs during the noon hour when they were generally telecast. County agents and innovator referents were rated highest on the utility dimension and lowest on affectivity. Legitimators, like farm magazines and television, were rated highest on the accessibility and practicality dimensions, which would appear to be quite understandable, but lowest on the utilitarian view, which does not seem logical since they were the persons named as most influential in farm practice adoption decisions. However, this does not mean that legitimators were not also rated high on utility; it does mean that in terms of the various ways that legitimators could be viewed they were seen as rating highest on accessibility and practicality.

About Variation in Views Related to Characteristics of the Viewer

Young farmers in both communities tended to be less positively oriented to farm information sources than the older ones. One exception in Ozark was that young farmers placed slightly higher utility evaluation than older ones on farmers they regarded as most influential in adoption decisions. In Prairie the only major reversal occurred for television. Somehow young farmers saw television as more practical than old ones even though both saw it as the least practical of all sources considered.

High adopters, who are probably the "best" farmers in a given community and thus pace-setters for others, had different views about farm information sources in Ozark and Prairie. In Ozark high adopters rated their own decisional referents a little higher than low adopters, thus suggesting a deference to own trusted local peers. In Prairie the reverse occurred. Also, whereas high adopters downgraded the county extension agent in Prairie, differences between the two adopter groups in Ozark were nil. The fact that farmers in Prairie were favorably disposed to agricultural chemical dealers may suggest something of a shift in orientation to quality commercial sources.

Another contrast was that high adopters in Ozark downgraded the mass media generally while in Prairie only farm magazines were somewhat downgraded. All of these community differences present something of a paradox; but since they occur in the thinking of the "best" farmer they cannot be dismissed lightly.

Two theoretical explanations are posed. One relates to the dictates of economic necessity and the other to the likely consequences of a developing commercialized agriculture for farm informational systems and for views held of farm information sources.

First, where the pressures of economic necessity have demanded marked changes in farm practices and enterprises merely for survival, those who adjust satisfactorily (and attrition rates were very high) are exemplars for others still striving to adjust. They are likely to be very good sources of information for both strivers and for information exchange among those already at the "top." This inclination seems to be reflected in the favorable orientation of young farmers

in Ozark to their own decisional influence referents (legitimators). Perhaps young farmers on Prairie, many of whom are heavily subsidized by fathers or fathers-in-law, can afford to take more risks and thus be less sensitive to what successful farmers are doing than the Ozark farmers. The farmers in Ozark prize legitimators higher than low adopters do as farm information sources but at the same time they are just a little more skeptical of innovators than of their own trusted informational referents.

A second theoretical explanation is that differentiation in views held of farm information source and use made of the sources may be expected with agricultural development both within nations and within local communities. In the process of shifting from a traditional, essentially subsistence agriculture to a modern specialized commercial agriculture, differentiation in views held of sources may be expected. First manifestation of this is likely to be in the quality of peers chosen as sources; then among types of sources (agency, commercial and mass media) as they become available. A distinction between the more and less expert sources would be expected with increased deference to the former and concurrent downgrading of the latter. A greater range in differentiated views would be expected; also an increasing inclination to use abstract knowledge for decisional purposes. Finally, publicly supported research agencies with a high reputation for developing quality information competence emerge, such as the agricultural experiment stations in the United States. These in turn may eventually have to share their esteemed position with quality commercial sources which seem almost certain to develop as part of a highly sophisticated and commercialized agriculture where commercial agencies are competing for the farm consumer dollar.

These theories would seem to explain:

1. The greater range in differentiation of views held of farm information sources in Prairie than in Ozark.
2. The greater differentiation in source use types of persons in Prairie than in Ozark.
3. The inclination of successful farmers in Ozark to defer to other highly successful farmers, but not just anybody, as valued sources of farm information somewhat in preference to innovators regarded as being usually first to try new practices.
4. And, finally, an inclination to shift from esteemed county extension agents (the public agency source of most repute) to commercial sources, particularly the ones that are in a position to exemplify the highest expertise, but not to the exclusion of the former.

Although innovators may not be the most influential farmers in the community or the best communicators of information, they certainly play an important role in the agricultural change acceptance processes; thus the view that they have of sources is likely of considerable consequence.

Quite in accord with what may be expected of the innovatively inclined, they march to the beat of their own drummers.[32] They are likely to view their own kind with disproportionate favor (among peers) as sources of farm information. They would accordingly be less oriented to their own decisional referents as sources, which is what this study showed.

Also in accord with the same general theory, it would seem that high mention innovators (like high mention legitimators) ought to downgrade the county extension agent as farm information source. Yet this was not the case. However, innovators in Prairie did upgrade the high expertise of agricultural chemical dealers. The possibility that the county extension agent is valued equally high by high and low mention innovators for different reasons should not be ruled out. For example, it may be that innovator farmers find the county extension agent a useful or convenient channel for obtaining information from the more direct research sources and value him for this reason while low mention farmers value him for the advice he gives. An expected inclination for innovative farmers to downgrade the mass media was evident in both communities, but was most marked in Ozark. This was in accord with the general inclination to the use of more direct and expertise sources of farm information by the more innovative farmers.
eral inclination to the use of more direct and expertise sources of farm information by the more innovative farmers.

About Source Use in Relation to Views Held

In regard to views in relation to use of sources, two questions were posed:

1. Do users of farm information sources view them differently than non-users and
2. Do farmers characterized by different patterns of source use hold different views of information sources?

The last question, of course, posed a prior one of what kind of patterns and who could be characterized as falling in each.

As expected, farmers who said they had obtained farm information from sources rated during the year prior to interview generally rated them higher than those who did not; the same tended to hold for each of the dimensions in Ozark but with some inconsistency in Prairie. In general, users of mass media in Ozark rated these sources higher than users in Prairie. This is an indication of the generally higher value placed on mass media as sources of farm information in Ozark than in Prairie. Yet the converse was true for users of the county extension agent as a source; i.e., users in Prairie rated him higher than users in Ozark. This likewise was an indication of the apparent higher rating of the county extension agent as a source by Prairie farmers than by those in Ozark.

In order to determine whether different kinds or types of farm information source users saw information sources differently, a typology of source use was used. This was achieved by a series of experimental cross tabulations of users of farm information sources into categories in terms of variety and number of sources used and the directness of the source used to the originating agencies of farm information. Extension sources were regarded as most direct and expert, other farmers as least, and the mass media and dealers as occupying in-between positions. Four recognizable types of users were defined in Prairie and three in Ozark. In general, Type I users in both communities tended to use very few sources and to confine use either to other farmers or mass media while Type III in Ozark used many information sources, including the direct ones. They also tended to display selectivity in terms of quality and directness sources. The same differentiation in user types was noted in Ozark as in Prairie except Type III in Prairie was also characterized by a high orientation to commercial sources in addition to the county extension agent, and the large number of additional sources used by them. In a sense, the types represent a continuum of source users arrayed on a number and quality basis.

In Ozark average evaluations on innovator and legitimator referents and county extension agents increased progressively from Type I through Type III. This was also true for all factored views except for the accessibility rating assigned to the county extension agent. Here the distinction was between Type I on the one hand, and Types II and III on the other. All of these views seem to be quite consistent with relative uses made of information sources by the three groups. In general, there was a strong tendency to upgrade county extension agents, innovators, and legitimator referents from a low position among Type I users through Type IV (Type III in Ozark) on all of the evaluative components. A similar type of upgrading was evident for the mass media on the affectivity dimension. In other words there was a certain increasing degree of "oneness" felt about these sources from Type I through Type IV. The same tended to be true with somewhat less consistency on the accessibility dimension.

Along with the progressive ratings assigned to the sources mentioned above, there was an accompanying tendency to downgrade dealers as sources, particularly on the practicality view across Types I through IV. Type IV farmers tended to downgrade dealers on the utility dimension. Other differences among types tended to be more peculiar to the particular user type; thus, Type I users were highly favorable to the utility view of dealers as sources of farm information to the exclusion of more direct sources, particularly the county agent. They also rated agricultural chemical dealers highest on the practicality view and, strangely, rated influentials least so. There was also an inclination to rate agricultural chemical dealers high on affectivity and accessibility. Type II farmers also were favorable to dealers but also included county extension agents and influentials as high in utility.

Type IV users tended to be distinguished by the high utility assigned to the direct-expertise types of sources and by their discrimination among sources generally on the directness-expertise continuum. Thus, high ratings tended to be assigned to county extension agents and to both innovator and influence referents along with agricultural chemical dealers, several of whom were agricultural professionals in their own right.

In the final analysis it can be said that farmers viewed farm information sources as having different qualities both in terms of overall ratings and in terms of components of meaning and that these views were related to the use that they made of the sources. The utilitarian, practicality, affectivity, and accessibility views provided more definite ways of viewing sources and thus for promoting image changes that could enhance their use. Research into the manner in which farmers come to possess these views could provide the means of further enhancing this effort.

General Conclusions

Some general conclusions growing out of the study were:

1. Farmers have characteristic ways of viewing farm information sources.
2. Utility, practicality, affectivity, and accessibility views can be distinguished.
3. Farmers in each of the two communities studied distinguished between classes of sources (government agencies, mass media and personal referents) in terms of these qualities and in some cases among sources within classes.
4. Some factors were more important than others in rating farm information sources, depending on the source considered and the community studied.
5. There is an inclination to greater differentiation in views held of farm information sources and more discrimination in terms of qualities instrumental to giving quality advice, with these manifestations greater—
   —in Prairie than in Ozark,
   —among young than among old farmers,
   —among modern oriented versus more traditional oriented farmers.
6. Farmers can be typed according to the number, kind, and quality of farm information sources used and views held of them vary significantly in terms of user types.

FOOTNOTES

1. For an original source concerning the use of this technique, see Charles Osgood, George J. Suzi and Percy H. Tannenbaum, *The Measurement of Meaning,* Urbana, Ill.: University of Illinois Press, 1957. For a more succinct statement concerning same, see Fred N. Kerlinger, *Foundations of Behavioral Research,* Chicago: Holt, Rinehart and Winston, Inc., 1967, pp. 464-580.
2. For a general treatment of methodological considerations regarding factor analysis, see L. L. Thurstone, *Multiple Factor Analysis,* Chicago: Chicago University Press, 1947; also Fred N. Kerlinger, *op. cit.,* pp. 650-697.
3. See Richard Leslie Lee, *The Flow of Information to Disadvantaged Farmers* (unpublished Ph.D. dissertation), Iowa City: University of Iowa, August, 1967, pp. 76-80.

   Although the practicality and utility views appeared as separate factors in this study, a study of views held of farm information sources by low income farmers by Lee showed no such distinction even though the items included in the Lee sample and referred to as practicality also included a component that we have referred to here as utility. See Lee, *op. cit.,* pp. 76-80.
4. Thus, in addition to the expertise component of credibility alleged by Hovland, Janis and Kelly, farmers seemed to distinguish a quality seemingly deriving more from practical experience than from scientific knowledge (Carl I. Hovland, Irving P. Janis and Harold H. Kelly, *Communication and Persuasion,* New Haven: Yale University Press, 1953, pp. 21-25.
5. Lee, *Ibid.*
6. Choice of this item would also be in accord with the convenience factor found by Lee, practically synonymous with the accessibility view. See Lee, *op. cit.,* pp. 76-80.
7. Osgood, Suzi, and Tannenbaum, *op. cit.,* Ch. 4.
8. William Stephenson, *The Play Theory of Mass Communication* Chicago: The University of Chicago Press, 1967, pp. 17-22; also Barney G. Glaser, *The Discovery of Grounded Theory,* Chicago: Aldine Publishing Co., 1967, Ch. 3, especially pp. 49, 63.
9. For an original statement concerning this subject, see Thurstone, *op. cit.*
10. Harry H. Harman, *Modern Factor Analysis,* Chicago: The University of Chicago Press, 1960, pp. 301-308.
11. The first criterion is rather arbitrary but often used. Berlo, Lemert, and Mertz in an unpublished paper entitled, "Dimensions for Evaluating the Availability of Message Sources" used it. Although 5% might have been a better criterion, the rationale still would have been arbitrary.

    The second criterion results from a consideration of whether or not an item has loaded significantly to a factor; i.e., whether the factor score which is computed as $\frac{r}{1-r^2}$ is above some generally specified value. With one chance

in a hundred of being incorrect as the accepted probability level, the value $3 \times \frac{1}{\sqrt{N}}$ was used (where N is the number of statements, and 3 is the number of standard deviation units from the mean). Actual computation put this value at .47 but .50 was used as an appropriate general criterion.

Donald F. Kiel and Charles F. Wrigley present the rationale for the third criterion in their "Effect upon the Factorial Solution of Rotating Varying Numbers of Factors," an unpublished paper presented at the Psychometric Society meetings, September 6, 1960.

12. For a discussion of the serendipitous manner in which these influential types were discovered, see Robert K. Merton, "Patterns of Influence: A Study of Interpersonal Influence and of Communications Behavior in a Local Community," in Paul Lazarsfeld and Frank Stanton (eds.) *Communications Research,* New York: Harper & Brothers, 1948-49, pp. 180-219.
13. For a description of the social areas from which the two communities were selected, see Cecil L. Gregory, *Rural Social Areas in Missouri: An Analysis of the Social Structures* Columbia: Missouri Agricultural Experiment Station Research Bulletin 665, April, 1958.
14. For a distinction between these two referent types see Everett M. Rogers, *Diffusion of Innovations,* New York: The Free Press of Glencoe, 1962, pp. 193-253. Also for a somewhat different method of defining innovator referents see Herbert F. Lionberger and H. C. Chang, *Comparative Characteristics of Special Functionaries in Two Missouri Communities,* Columbia: Missouri Agricultural Experiment Station Research Bulletin 885, April, 1965.
15. In order to determine whether these overall differences in evaluation were significant or not, two statistical tests were conducted. An analysis of variance determines whether there are overall significant differences in the set of general evaluations. The second test, a multiple range t-test determines which specific sources are viewed distinctly from the others.

    As each respondent evaluated all sources, randomized block analysis of variance was the procedure employed. Interpretation of the results is tenuous, however, as an order effect is present, due to non-random presentation of the order of the sources to be evaluated.

    The analysis of variance for the Ozark data yield an F value of 20.48 which is significant beyond the .01 level of confidence. (See table 3.) Thus it appears that, overall, the Ozark respondents perceive the five information sources differently—i.e., they have different meaning. Knowing this, the data were then submitted to Duncan's multiple t-test procedure. For a description of the statistical tests used see Clyde Young Kramer, "Extension of Multiple Range Tests to Group Means with Unequal Numbers of Replications," Biometrics, (September, 1956), pp. 307-310.

16. Because of this complication it was necessary to conduct the analysis of variance and the multiple t-tests *on each set* of Prairie respondents. (See tables 5 and 6.) In addition to these analyses it was necessary to conduct t-tests between sets of respondents on the first three concepts in order to completely determine distinctiveness of meaning between these six information sources.
17. Interpretation of these results are tenuous, however, as the sources were not presented in random order. As the reader may know, proper use of the employed analysis of variance procedures requires that the stimulus—information sources—be presented to respondents in a random order; but for expedient reasons this was not done in the study.
18. To complete the analysis of the general differences in view of information sources in Prairie, it was necessary to conduct t-tests between each of the first three information sources evaluated by series one respondents—television, agricultural chemical dealers, feed dealers—and each of the first three information sources evaluated by series two respondents—farm magazines, radio, county agents. (See table 7.)
19. A confounding influence on interpretation of these results is that the differences may be due to the different way the respondents in series one judge information sources from the way respondents in series two judge them, rather than real differences.
20. This would appear to be the result of upgrading quality dealers as sources of farm information rather than downgrading county extension agents and innovator referents.
21. Kramer, *op. cit.,* pp. 307-310.
22. B. J. Winer, *Statistical Principles in Experimental Design,* New York: McGraw-Hill Book Company, Inc., 1962, pp. 148-150.
23. Winer, *Ibid.*
24. Herbert F. Lionberger and C. Milton Coughenour, "Social Structure and Diffusion of Farm Information," Columbia: Missouri Agricultural Experiment Station Research Bulletin 631, April, 1957, pp. 58-74.
25. Rogers, *op. cit.,* pp. 202-204.
26. See Appendix IIB for a description of the modernism measure and its application.
27. It was previously found that farmers in Ozark were somewhat more inclined to choose decisional referents (legitimators) in terms of likely technological competence than in Prairie. (See Herbert F. Lionberger and H. C. Chang, Research Bulletin 885, *op. cit.,* pp. 30-31.) On the other hand, farmers in Prairie seemed to rely somewhat more on direct sources of farm information for legitimation purposes than farmers in Ozark. (See Herbert F. Lionberger, *Legitimation of Decisions to Adopt Farm Practices and Purchase Farm Supplies in Two Missouri Farm Communities, Ozark and Prairie,* Columbia: Missouri Agricultural Experiment Station Research Bulletin 826, April, 1963, p. 7.)

28. Herbert F. Lionberger, *Information Seeking Habits and Characteristics of Farm Operators,* Columbia: Missouri Agricultural Experiment Station Research Bulletin 581, April, 1955.
29. Wilma Bruner Crumley, *A Q-Methodological Study of Attitudes About Mass Communication* (unpublished Ph.D. dissertation), Columbia: University of Missouri, January, 1966.
30. Four sub-groups were included in this type; namely,
    a. Those who used several farm information sources in addition to mass media and other farmers
    b. Those who used college bulletins but only a couple of other sources in addition to mass media and farmers
    c. Those who used the county agent but made use of few other sources
    d. Those who used college bulletins and county extension agents but few other sources.
31. This type included three use patterns:
    a. Those who used a variety of the information sources (5-10 different sources) or a large number of sources (10 or more different sources), but no such direct sources as colleges bulletins or county extension agents;
    b. Those who used either college bulletins or county extension agents, or received information directly from a faculty member of the University of Missouri, plus a variety of other sources;
    c. Those who used at least two of the more direct sources and made moderate use of others;
    d. Lastly, those who used at least two of the more direct sources and made heavy use of the other less direct sources.

    Sub-type d was originally thought to constitute a fourth distinct pattern, but was included under Type III after looking at mean values on variables correlated with information source use patterns.
32. Rogers, *op. cit.,* pp. 203-204.
33. Harmon, op. cit.
34. Robert N. Ford, "A Rapid Scoring Procedure for Scaling Attitude Question", *Public Opinion Quarterly,* XIV, #3, (Fall 1950)
35. Leon Festinger, "The Treatment of Quantitative Data by Scale Analysis", *Psychological Bulletin,* 1947, 44:149-161.

APPENDIX A. SUPPLEMENTAL TABLES

TABLE I -- LOADING OF ITEM SCALES ON DESIGNATED FACTORS

Item Scales	Factor						
	Utility I	Affect-ivity II	Practi-cality III	Access-ibility IV	V	VI	h^2
1. Friendly - unfriendly	-.37	.66	.14	-.04	-.24	.09	.66
2. Impersonal - personal	.19	-.45	-.10	.06	-.23	.13	.32
3. Good - bad	-.75	.19	.26	-.10	-.17	.06	.71
4. Unhandy - handy	.27	-.03	.18	.64	.02	-.01	.51
5. Superior - inferior	-.61	.19	.41	-.29	-.06	.09	.67
6. Lacks understanding - understanding	.60	-.38	-.23	.25	.12	.05	.64
7. Trustworthy - untrustworthy	-.71	.43	.27	.08	-.22	.02	.82
8. Inexperienced - experienced	.61	-.35	-.11	.11	.00	.37	.66
9. Knowledgeable - not knowledgeable	-.78	.23	.18	-.13	.04	-.19	.75
10. Not timely - timely	.34	-.09	-.17	.23	-.14	.26	.29
11. Well informed - not well informed	-.74	.16	.09	-.18	-.12	-.19	.67
12. Dependable - undependable	-.64	.38	.38	-.07	.02	-.03	.71
13. Impractical - practical	.55	-.20	-.33	.17	-.18	.05	.52
14. Careful - not careful	-.58	.28	.31	-.06	.29	-.32	.70
15. Up to date - out of date	-.72	.04	.06	-.26	-.03	-.14	.62
16. Untruthful - truthful	.36	-.33	-.44	-.09	.06	.36	.58
17. Incomplete - complete	.59	-.36	-.26	.20	-.12	.06	.60
18. Accessible (on hand when needed) - inaccessible	-.26	.46	.13	-.46	-.09	-.17	.54
19. Inconsiderate - considerate	.29	-.67	-.17	.07	-.06	-.05	.58

APPENDIX TABLE I (continued)

	Item Scales	Factor I Utility	II Affect-ivity	III Practi-cality	IV Access-ibility	V	VI	h^2
20.	Scientific - unscientific	-.60	.23	.27	-.08	.05	.05	.50
21.	Unavailable - available	.34	-.21	-.35	.55	-.05	.05	.58
22.	Inviting - not inviting	-.33	.54	.20	-.28	-.03	.02	.51
23.	Not helpful - helpful	.49	-.52	-.26	.22	.12	.01	.64
24.	Willing - not willing	-.24	.62	.31	-.08	.04	-.04	.55
25.	Cool - warm	.14	-.72	-.16	.15	.08	.33	.69
26.	Eady to understand - hard to understand	-.20	.42	.18	-.11	-.17	.-.17	.32
27.	Unwelcome - welcome	.28	-.46	-.32	.23	.48	.21	.72
28.	Approachable - unapproachable	-.19	.79	.14	-.17	.20	-.06	.74
29.	Irregular - regular	.34	-.34	-.25	.41	.13	-.08	.48
30.	Easy - hard	-.16	.49	.23	-.35	-.02	-.05	.44
31.	Beneficial - harmful	-.45	.16	.63	-.08	-.30	-.06	.72
32.	Uncertain - certain	.44	-.25	-.50	.31	-.03	-.03	.61
33.	Complete - incomplete	-.61	.30	.34	-.29	.25	.16	.75
34.	Uncooperative - cooperative	.08	-.76	-.40	.20	-.04	-.05	.79
35.	Conservative - progressive	-.01	.01	-.04	.02	.39	.01	.15
36.	Undependable - dependable	.37	-.40	-.71	.08	.08	.00	.81
37.	Dull - exciting	.08	-.24	-.38	.47	.03	.13	.45
38.	Difficult - easy	.06	-.47	-.31	.49	.08	.35	.69
39.	Safe - risky	-.40	.24	.55	-.20	.05	-.01	.57
40.	Senseless - sensible	.33	-.33	-.62	-.05	.14	.28	.70
41.	Unwise - wise	.34	-.24	-.74	.15	.02	.18	.77
42.	Rural - urban	-.23	.57	.01	.00	-.08	-.12	.40
43.	Distant - close	.09	-.44	-.18	.25	.16	.44	.51
	Percent Total Variance	19.72	16.70	-11.12	6.35	2.51	2.98	59.63
	Percent Common Variance	33.07	28.01	18.65	10.65	4.21	5.00	100.00

TABLE II - FACTOR PROFILES

Item Scales	"Factor Purity" Score	Factor Loading
Factor I		
3. Good - bad	.20	-.75
5. Superior - inferior	-.28	-.61
6. Lacks understanding - understanding	-.26	.60
7. Trustworthy - untrustworthy	-.07	-.71
8. Inexperienced - experienced	.04	.61
9. Knowledgeable - not knowledgeable	.24	-.78
11. Well informed - not well informed	.31	-.74
13. Impractical - practical	-.15	.55
14. Careful - not careful	-.07	-.58
15. Up to date - out of date	.36	-.72
16. Untruthful - truthful	-.23	.36
20. Scientific - unscientific	.02	-.60
33. Complete - incomplete	-.32	-.61
Factor II		
1. Friendly - unfriendly	.11	.66
19. Inconsiderate - considerate	.14	-.67
22. Inviting - not inviting	-.27	.54
23. Not helpful - helpful	-.45	-.52
24. Willing - not willing	.01	.62
25. Cool - warm	.27	-.72
28. Approachable - unapproachable	.29	.79
34. Uncooperative - cooperative	.08	-.76
42. Rural - urban	.33	.57
Factor III		
31. Beneficial - harmful	-.06	.63
32. Uncertain - certain	-.50	-.50
36. Undependable - dependable	-.14	-.71
39. Safe - risky	-.29	.55
40. Senseless - sensible	-.09	-.62
41. Unwise - wise	.01	-.74
Factor IV		
4. Unhandy - handy	.16	.64
21. Unavailable - available	-.35	.55

TABLE III - INTERCORRELATION OF SELECTED ITEM SCALES HIGHLY LOADED* WITH FACTOR I, (UTILITY)

Item Scales	No.	Loading on Factor I	Item Number													
			3	5	6	7	8	9	11	12	13	14	15	17	20	33
Good - bad	3	-.75		.74	-.64	.70	-.55	.68	.62	.63	-.54	.49	.62	-.51	.50	.66
Superior - inferior	5	-.61			-.58	.58	-.51	.59	.59	.63	-.58	.47	.58	-.54	.59	.61
Lacks understanding - understanding	6	.60				-.66	.65	-.62	-.58	-.59	.50	-.51	-.60	.61	-.51	-.61
Trustworthy - untrustworthy	7	-.71					-.56	.71	.66	.78	-.53	.55	.56	-.58	.62	.59
Inexperienced - experienced	8	.61						-.66	-.61	-.56	.51	-.65	-.50	.58	-.48	-.51
Knowledgeable - not knowledgeable	9	-.78							.75	.70	-.64	.65	.64	-.65	.56	.64
Well informed - not well informed	11	-.74								.72	-.46	.53	.65	-.50	.50	.49
Dependable - undependable	12	-.64									-.56	.60	.52	-.60	.59	.58
Impractical - practical	13	.55										-.53	-.48	.53	-.41	-.62
Careful - not careful	14	-.58											.46	-.66	.51	.62
Up to date - Out of date	15	-.72												-.48	.45	.53
Incomplete - complete	17	.59													-.65	-.76
Scientific - unscientific	20	.60														.59
Complete - incomplete	33	-.61														

*. 50 or over

TABLE IV - INTERCORRELATION OF ITEM SCALES HIGHLY LOADED* WITH FACTOR II (AFFECTIVITY)

Item Scales	No.	Loading on Factor II	Item Number									
			1	19	22	23	24	25	28	34	42	43
Friendly - unfriendly	1	.66		-.60	.41	-.60	.56	-.56	.55	-.60	.61	-.41
Inconsiderate - considerate	19	-.67			-.58	.66	-.54	.55	-.59	.62	-.44	.37
Inviting - uninviting	22	.54				-.59	.53	-.49	.61	-.51	.33	-.28
Not helpful - helpful	23	-.52					-.50	.56	-.53	.56	-.36	.41
Willing - unwilling	24	.62						-.56	.58	-.65	.41	-.35
Cool - warm	25	-.72							-.68	.63	-.53	.58
Approachable - unapproachable	28	.79								-.77	.45	-.39
Uncooperative - cooperative	34	-.76									-.48	.43
Rural - urban	42	.57										-.43
Distant - close	43	-.44										

*.50 or more

TABLE V - INTERCORRELATION OF ITEM SCALES LOADED* WITH FACTOR III (PRACTICALITY)

Item Scales	No.	Loading on Factor III	Item Number 31	32	36	39	40	41
Beneficial - harmful	31	.63		-.57	-.72	.57	-.64	-.67
Uncertain - certain	32	-.50			.69	-.64	.49	.61
Undependable - dependable	36	-.71				-.64	.67	.69
Safe - risky	39	.55					-.57	-.65
Senseless - sensible	40	-.62						.74
Unwise - wise	41	-.74						

*.44 or more

TABLE VI - INTERCORRELATION OF ITEM SCALES HIGHLY LOADED* WITH FACTOR IV (ACCESSIBILITY)

Item Scales	No.	Loading on Factor IV	Item Number 4	18	21	37	38
Unhandy - handy	4	.64		-.45	.38	.33	.22
Accessible - Unaccessible (on hand when needed)	18	-.46			-.61	-.37	-.63
Unavailable - Available	21	.55				.45	.46
Dull - exciting	37	.47					.53
Difficult - easy	38	.49					

*.45 or more

TABLE VII - TEST FOR INTERACTION EFFORTS BETWEEN DIMENSION OF MEANING AND INFORMATION SOURCE BEING EVALUATED BY OZARK RESPONDENTS

(Analysis of Variance)

Source of Variation	Sums of Squared Deviation	Degrees of Freedom	Mean Square
Information Source	39.87	4.0	9.97
Dimension of Meaning	18.33	3.0	6.11
Interaction	41.47	12.0	3.46
Error	1054.28	208.0	5.07
Total	1153.95	227.0	--
	F Ratio = 0.68		

TABLE VIII - TEST FOR INTERACTION EFFORTS BETWEEN DIMENSION OF MEANING AND INFORMATION SOURCE BEING EVALUATED BY SERIES ONE PRAIRIE RESPONDENTS

(Analysis of Variance)

Source of Variation	Sum of Squared Deviation	Degrees of Freedom	Mean Square
Information Source	8.30	4.0	2.08
Dimension of Meaning	13.56	3.0	4.52
Interaction	25.95	12.0	2.16
Error	120.31	65.0	1.85
Total	168.06	84.0	--
	F Ratio = 1.16		

TABLE IX - TEST FOR INTERACTION EFFORTS BETWEEN DIMENSION OF MEANING AND INFORMATION SOURCE BEING EVALUATED BY SERIES TWO PRAIRIE RESPONDENTS

(Analysis of Variance)

Source of Variation	Sum of Squared Deviation	Degrees of Freedom	Mean Square
Information Source	55.05	4.0	13.76
Dimension of Meaning	6.80	3.0	2.27
Interaction	18.45	12.0	1.54
Error	379.74	80.0	4.75
Total	460.04	99.0	--
	F Ratio = 0.32		

APPENDIX B. METHODOLOGICAL SUPPLEMENT

A. Method and Rationale Used for Selecting Scale Items

Due to a rather stringent limitation on the number of scales considered feasible for use in the second phase of the research, only a dozen or so of the original 43 items could be used in the second phase of the study. The four strongest factors of the six factor rotated solution (the one yielding the most meaningful and theoretically relevant profiles) were selected as the factors to be described. As a first consideration it was felt that the number of items included to represent each of the four main factors should be in accord with the proportion of common variance explained by the respective factors. At the bottom of Table I in Appendix A, in terms of the first criterion, note that the first factor explained 33 percent of the common variance, factor two explained 28 percent, factor three approximately 19 percent, and factor four explained approximately 11 percent. With 12 items as a practical upper limit, it was felt that three to four should be chosen from factor one to represent the first factor, two or three for factor two, two for factor three, and that perhaps two items should be selected to represent factor four.

Having accepted this criterion, the next problem was to select the items. For this, three more criteria were used (2, 3 and 4). Second on the list, it was held that an item had to correlate .5 or more with a factor (i.e., its factor loading had to be greater than .5 for selection). In Table 2 of Appendix I, the reader will find a listing of all those items which loaded .5 and above on each of the respective factors.

Because an item may load high on more than one factor, a third criterion for selection was needed; namely, that an item chosen load distinctly only on one factor. Realizing that none of the items would meet this ideal; i.e., load 1.0 on a factor, a scoring procedure for determining a factor purity score was devised. First it was determined on which factor an item loaded most highly. Then from this value the absolute values of the loadings on the other three factors were subtracted. The resulting value was called the "factor purity" score of that item for that factor. For example, the good-bad scale loaded highest (.75) on the first or utility factor, but also .19, .26, and .10 on the other three. The sum of the last three subtracted from .75 yielded the purity score, which in this case was .20. Although admittedly crude, these scores permitted a rough ordering of the degree to which items loaded uniquely on a factor.

The fourth criterion specified that descriptive items should not intercorrelate highly with each other, thus insuring that they measure different qualities of meaning.

In summary, the selection criteria were:

1. that items selected to describe each factor be roughly in proportion to the variance explained by the factor with 12 items regarded as a practical upper limit;

2. that the items load .5 or more on the factor;
3. that the items approximate general purity standards and;
4. that those selected to describe a factor not be highly correlated with each other.

Turning now to the selection of items to be included, criteria one specified that the number of items selected for factors one through four be 4, 3, 2, and 2 in that order. In terms of the second criteria it will be seen from Appendix A, Table II, that at least five items would qualify for factor one since all loaded .50 or over on that factor. These were:

knowledgeable - not knowledgeable	.78
good - bad	.75
informed - uninformed	.74
up to date - out of date	.72
trustworthy - untrustworthy	.71

But since only four scales or items could be selected to measure this factor, one had to be eliminated.

The third criteria, the reader will recall, was a factor purity score for the item. Looking at the column entitled factor purity score, we find that the *up to date - out of date* scale had the highest score, the *informed - uninformed* scale had the second highest, the *knowledgeable - not knowledgeable* was third, the *good - bad* scale was fourth. On the basis of all three of the criteria, then, these four should be the set of items chosen to represent the factor. However one difficulty ensued: the *informed - uninformed* and *knowledgeable - not knowledgeable* scales were highly correlated. This was in violation of the fourth criteria (that the scales which were chosen to represent the factors have low intercorrelations). For only if this were true would each of the items tap one of the complex subaspects of the dimension being represented.

In Table III, under the columns for items number 9 and 11 and the rows for items number 9 and 11, the item *will informed - not well informed* seems to have lower intercorrelations with the rest of the items than does the *knowledgeable - not knowledgeable* scale. However, with many of the differences not statistically significant, final resolution became a matter of subjective judgment. The investigators accordingly selected the *knowledgeable - not knowledgeable* scale as the most appropriate.

Having eliminated one of the top four candidates, it was necessary to pick up a fourth. The next eligible candidate, the *trustworthy - untrustworthy* scale, was selected. Factor one, then, was represented by the scales *good - bad, untrustworthy - trustworthy, knowledgeable - not knowledgeable, out of date - up to date.*

The candidates which could possibly represent factor two included the *approachable - unapproachable* scale which had the highest factor loading on factor two, the *cooperative - uncooperative* scale the second highest, the *warm - cool* scale third and the *considerate - inconsiderate* fourth. However, as only three scales were desired to represent this factor, this meant one would have to be eliminated.

Looking at the column for factor purity score, we find that the *rural - urban* scale had the highest factor purity score. However, this one was not a candidate because of its low factor loading. The second highest loading one was the *approachable - unapproachable* scale. The third highest was the *warm - cool* scale and the fourth, *considerate - inconsiderate.* Employing both criteria, then, the chosen scales were *approachable - unapproachable, warm - cool,* and *considerate - inconsiderate.* You will note in Table IV, that these three scales had fairly low intercorrelations.

The candidates which could possibly represent factor three included the *wise - unwise* scale, which loaded the highest and also had the highest factor purity score. The *dependable-undependable* scale had the highest factor loading though it had the fourth highest factor purity score, and the *beneficial-unbeneficial* scale had the third factor loading and the second highest factor purity score. The scales chosen to represent this factor, then, included the *wise-unwise* scale and the *dependable-undependable* scale. Although the *dependable-undependable* scale had a lower factor purity score than did the *beneficial-unbeneficial* scale, it was found that the higher factor loading of the former more than offset its lower factor purity score. Also the *dependable-undependable* and *wise-unwise* scales are more indicative of a practicality dimension than is the *beneficial-unbeneficial* scale.

As there were only two scales which loaded above .5 with factor four, these two scales were chosen to represent it. These were the *handy - unhandy* scale and the *available - unavailable* scale.

A *scientific - unscientific* scale was included mainly to see how information sources varied in terms of this quality, which many have regarded as a central concern of existing institutional social systems for development and dissemination of farm information. However, it was not used in computing any of the factor averages which were later used in the statistical analysis.

B. Construction of the Modernism Scale

This *a posteriori* type scale was constructed from responses of farmers in Ozark and Prairie to questions assumed to indicate varying degrees of modernism vs. traditionalism in farming. The scaling procedure consisted of evaluating the responses to determine whether they adequately met a common content and scalability criteria.

1. *The Stimulus Response Context*

The respondent was introduced to a set of 11 items through a general statement indicating that we wanted to ask him about his feelings in regard to various views that people often have about requirements for success in farming.
The specific introductory statement was:

> You hear a lot of ideas about what it takes to be successful in farming these days. We have collected some of them. I would like to ask whether you think each is of no, little, some, much, or very much importance over the long run.

The interviewer then read the 11 items and asked the respondent to indicate his response to each. These response items were:

1. Luck
2. God's will
3. Doing mostly what other farmers do
4. Hard work
5. Using latest scientific farm information
6. Saving money
7. Management
8. Family help in the fields
9. Watching the signs of the moon
10. Plenty of production credit
11. Own experience

a. *Dimensionality.* Preliminary investigation of the distribution of responses indicating intensity of feeling in regard to the items suggested the possibility of constructing a *traditionalism - modernism* scale. This immediately posed the question of dimensionality of the item responses, which in turn was approached by the use of factor analysis.[33] Both a two-factor and three-factor solution were requested using them (1) with both communities (samples) taken together and (2) with each community (sample) considered separately. For both the combined and separate community samples, the two-factor solution proved to be more mathematically and theoretically correct. Moreover, by analyzing the content of the items which loaded significantly on the factors (f.s. $>$ .20), the first one could easily be envisioned as a modernism view. The following items loaded significantly on the first factor when both samples were considered together:

1. Use of latest scientific information
2. Management of the farm
3. Family help in the field
4. Use plenty of production credit
5. Own experience

In Ozark, the following six items emerged as candidates for a scalogram analysis:

1. Use plenty of production credit
2. Use of latest scientific information
3. Family help in the fields
4. Own experience
5. Hard work
6. Management of the farm

In Prairie the following modernism items emerged:

1. use of latest scientific information
2. saving money
3. plenty of production credit
4. hard work
5. own experience
6. management of the farm

Thus for the two communities all items were the same except "use of family help in the fields" appeared in Ozark but not in Prairie, and "saving money" appeared in Prairie.

b. *Final Items.* On the basis of these analyses it was decided that only a subset of the original items would be used to construct the modernism scale by use of Guttman procedures;[34] namely, those that appeared on the modernism factor. Because we desired to use the same items for scaling in both communities, the next problem was to select those items which were common to all three samples (both communities, and each community considered separately). The following were found to be in common:

1. use of latest scientific information
2. management
3. hard work
4. use plenty of production credit
5. own experience

2. *Guttman Scaling Procedures*

Constructing scales by Guttman's method required dichotomization of responses to each question. This was done by considering the "positive" responses to include the "much" and "very much" responses. The others were considered to be negative responses. This "cutting point" was employed in both communities. Each of the items thus divided had between 20 and 80 percent positive responses.

The coefficient of reproducibility for Ozark was 0.91. Festinger's Chi-square test for the presence of a unidimensional scale showed a significant X^2, indicating the presence of a scale.[35] The coefficient of reproducibility for Prairie was .88; X^2 was significant, indicating the presence of a scale and with none of the items contributing over 14 percent error as a result of the assignment of scale types, a workable scale with a similar set of items applicable to both Ozark and Prairie was constructed. This then permitted scoring of individuals and valid cross-community comparisons on the modernism scale.

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